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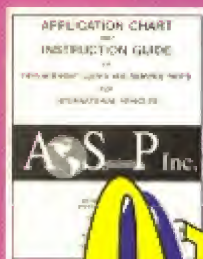
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November 1994
Volume 65, No. 11

INCOME



OPPORTUNITIES



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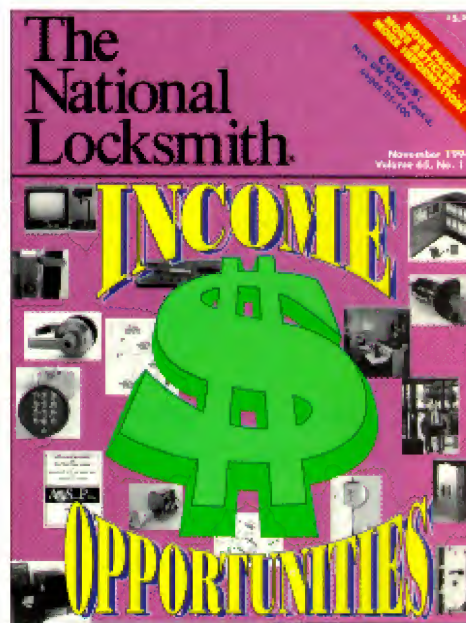
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On The Cover

New products, new tools, new techniques. All new ways to minimize effort and maximize profit.

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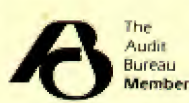
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COMMENTARY

Coming soon! Reader's choice for The National Locksmith TOP 100

One thing I have learned over the years is that every locksmith has an opinion! I've never met the locksmith worth his salt who didn't know a way to improve half the products manufactured in this industry.

That's why it is a high honor indeed when a group of locksmiths selects a particular product as being especially excellent. Haven't you always wished someone would ask your opinion about which are the finest products manufactured in the locksmith industry?

Well, someone finally is....we are! I'm proud to announce a prestigious new award called *The National Locksmith TOP 100*. Recipients of this honor will really earn their stripes since YOU are the people who will be conferring the award. *The National Locksmith TOP 100* is strictly a Reader's Choice award, so naturally it is very important for you to vote.

Your January issue will contain a *TOP 100* ballot. All you have to do is fill in your selections in a variety of product categories. Pick what you believe to be the best quality, most functional products manufactured in each category. Then return the ballot to us for tabulation. We'll announce the winners in June's issue, and at that time we will profile each of the award winning products.

So keep an eye out for the January issue, and use this chance to express yourself. Your opinion counts!

A group called Allied Locksmiths For Illinois has been working hard to try and protect the rights of locksmiths in this state. They recently sent me some information about a new problem in Florida which is almost beyond belief.

It seems that Dade County Florida has passed an ordinance which states that locksmiths can no



Marc Goldberg
Editor/Publisher

longer work on automotive locks unless they have an auto mechanic's license. In fact, several locksmiths have already been issued notices of fines for working on auto locks.

A group of Florida locksmiths, headed by Irene Wickward and Jeff Nunberg, are working to get legislation passed to exempt locksmiths from this ridiculous law. I personally have never heard of a dumber law in my life! What a mechanic knows about car locks wouldn't fill a 5/16" socket.

I have to fess up to a major "oops." In September's Commentary, I warned you about a company called American Tool Co. They are selling tryout keys and accept only pre-payment or COD with certified check. Unfortunately, the advertising and editorial departments here were unaware that this same company took a Product Guide ad in October. Naturally, we've kicked them out of our magazine. Want to hear the best part? Their check bounced.

Recently, an irate lady called me from Texas. It seems a 15 year old boy in her neighborhood called a locksmith to make keys for a car parked near her house. The locksmith made the keys which the child used to joyride in the car. He was arrested.

This lady was furious that a locksmith would make keys to a car for a 15 year old. Forget the fact that he no doubt represented the car as his own or his mother's. What amazed me is that the lady blamed everything on the locksmith. I told her she didn't have a locksmith problem.....she has a parenting problem. The boy was her son.

What's a poor locksmith to do?!

LETTERS

Comments, Suggestions and Criticisms

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length. Please address your comments, praise, or criticism to Editor, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107. All letters to the editor must be signed.

Felony Stings

Dear Marc:

Enough is enough. The constant harassment and embarrassment brought on the locksmith industry by sting operations has prompted me to write this.

There is no way known to man to protect all people, all of the time, from violations of their privacy, or violations of their security. But, in all states and jurisdictions of law, that I am aware of, there exists laws that are on the books to supposedly protect the innocent from violations. Sting operations or not, it is a felony to solicit for hire, a criminal act. Breaking and entering is a felony. Paying someone to do it for you, is a felony.

Simply put, do your job. If the next call is a sting, do not stop. Open the door you were hired to open. Enter the building, write your bill, and collect your fee for your service. Then call for the police to have the news crew arrested and prosecuted for committing a felony. Most of all, do not stop or relent.

Make the prosecution happen. Publish the names of the news crew in the paper telling the public how the news crew can no longer be trusted because they are felons. Demand publicity that all of the parties responsible for hiring you lose their jobs and carry a felony record from now on.

I guess what I am really saying is do your job. Don't run and hide, don't sit there crying and acting dumb. You are supposed to be a professional, so

be one. You were violated, so do what you can to protect your own rights as well as the rights of fellow locksmiths, for the sake of our industry.

William Johnson
Virginia

Editor's Note:

Unfortunately sting operations have become more and more common. Even in states, such as Illinois, where covert recording is supposed to be against the law, locksmiths have been the targets for the news media.

How do we solve the problem?

First, protect yourself. Do what you can to verify (we cannot confirm) ownership. Ask for some form of identification. If that is not possible, ask for some information that only an owner may know. Call the police out for any suspicious activity. Do what is necessary to put the customer in the position of being liable, not yourself! Turn down calls if necessary.

Second, support positive locksmith legislation. While these laws are created to protect the public, they also protect you. They create a standard of procedure for situations where identification or verification may come into question.

Most of us realize that the media has been irresponsible in their approach and presentation of the locksmith. But what can we expect from a group of "professionals" driven by sweeps week?

While your approach may work, William, I think it would be better if we didn't place ourselves into these types of situations in the first place.

Big Dawgs Plus

Dear Marc:

As a member of the locksmith industry for about five years, and owner of my own shop for about one, I feel that the articles about "Huntin'

With The Big Dawgs" by Jake Jakubowski are most appropriate to the little guy. However, I have a few suggestions.

First of all, in the large keying job that he did, why didn't he cut, stamp and number the keys in the shop long before he went to the job? Then all three locksmiths could have been keying full time. It might also have been feasible to have hired a fourth person, divided the crew into two teams and had one sit and rekey while the others removed and replaced locks. In this way, it would not have been necessary to have gotten up and down as much, walked as much, or become distracted from the job at hand by doing more jobs. The team members could switch off to reduce both boredom and fatigue.

Second, I think that the purchase of a computer program to do his masterkeying charts would have also eliminated a tremendous amount of work. One of my accounts is a school system, and I have generated a keying chart for upwards of 100 doors with a grand master, various submasters and change keys, so far no cross keying has been discovered.

Jake also does not mention that once you get an account, like the rekeying job, it is usually possible to handle their locksmith work without having to enlist outside help. This is also found money. I have also discovered that the employees of these large concerns tend to use me as their own locksmith, and I get the work from their homes and cars.

Remember the only real difference between the big dawgs and the little dawgs are the size of their expenses. More employees, more headaches; more vehicles, more breakdowns, etc. I think I'll stay a little dawg.

Bert Kovash
New Jersey

Editor's Note:

Thanks for your response, Bert. It goes to show that Jake's on the right track - Little Dawgs can compete with the Big Dawgs. Being a little guy doesn't have to put you at a disadvantage!

As for your suggestions, again, thank you. While the intent of Jake's article was not on the process, we can all use some help there. Remember, efficiency yields profitability.

Squaring Away A Relocker

Dear Marc,

In Dale Libby's article in the August 1994 *The National Locksmith* he did not include some information for those locksmiths who really want to know more about the Diebold Tri-bolt Safe that uses the 180-55 lock.

First he states, "If the relockers are ever set off, one's best chance for opening this unit is to drill and cut each bolt with a carbide hole saw similar to a GSA opening procedure."

Unfortunately, he fails to say where to cut the bolt. If he means between the center relocker and outer relocker, he is putting the locksmith in real trouble. This is because each bolt has its own individual relocking device. Dale should have said each bolt has two relocking devices.

The center one he shows in the picture, but the outer one is hidden in the hub near the perimeter.

In the outer relocker there is a shear section in the bolt along with a compression spring that holds the tip of the bolt out. If one drills the bolts as Dale suggests the outer relockers will hold the bolts out (using spring compression).

I sincerely believe that locksmiths should know this fact.

Art Patch
California

More Do-It-Yourselfers

Dear Marc:

Remember the good old days when locksmiths were called to install, replace and or diagnose a domestic automotive problems? Well, I was at Advance Auto Parts in my area to get a few items to repair my service vehicle. I walked down the row where the fuses, toggle switches, and bulbs were displayed. And guess what?

I found a quarter of a row of GM, Ford, and Chrysler complete locksets from ignition to deck up to '93, with instructions for the do-it yourselfer and instructions on what tools to use to do the job.

Like any locksmith, (consumer) I decided to check prices, manufacturer, seller etc. Well these locks are being sold under the name Lock Works, with a life time guarantee, meaning: As long as the consumer owns his or her car, truck, or minivan.

Prices start at \$7.99 to \$12.99 to the consumer ready to install.

The point of this is to ask at what cost do we purchase and sell these products? At a higher price? What about our pricing, both labor and parts, plus service call? How do we compete?

Willie Bowen, CPL
Virginia

Editor's Note:

Willie,

This is an issue we all face and is addressed by Managing Editor Tom Seroogy in this month's Seroogy Speaks. See page 82.



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by
Art Shook

VIEWPOINT: LESSONS LEARNED IN POLITICS

A guest editorial from a reader.

As you watch TV or listen to the news about various crimes, do you notice who does the most screaming? The ones who have something to hide, the guilty ones. Well, maybe not all of them, but I'm sure the majority.

When trying to get locksmith legislation passed on a Federal, State, or even County level, who does the most screaming for the opposition?

As an officer of a large locksmith association, I've learned a lot about people, politics, right and wrong. But I still feel ignorant and incapable of handling the stress of dividing an association and friends amongst an issue that effects this entire industry - Locksmith Legislation.

We all talk about educating the public about locksmiths, what we do and what we stand for. But before we can educate them about us, we have to educate ourselves.

In the beginning, locksmiths were very secretive of their trade, they thought they were protecting their craft. If you wanted to be a locksmith you had to work for one. And at that, the locksmith only taught you what he/she wanted you to know. The trouble begins when we believe we've learned all that we need to learn to be a locksmith.

Now all that has changed. We have learned that teaching somebody else will not deter our own business unless they did not learn the legal and moral requirements that go with the locksmithing trade. Hence...legislation!!

I believe division among locksmiths over legislation is caused because each one as an individual is still secretive and protective of their trade. After all, look at the ones out there that call themselves locksmiths. We taught them. But they lack the ability to operate legally and or morally. Be it their choice, or

circumstance, it is our responsibility to correct this. And it can only be done through legislation.

We have suffered a long time without legislation, and it continues to get worse each year as other trades impose their regulations upon us.

To start any kind of legislation someone has to put ideas on paper. It's irrelevant what it says, but it has to start some place. Then those ideas are taken to someone else who will input their ideas. Then you may bring in a few more people into the group, and they too, give their opinions and thoughts. The more people that take part in this process, the more you'll form a general opinion of what legislation should be, and what the majority wants.

You cannot have all locksmiths involved, or you'll never get anyone to agree on anything. It's the old adage that "Too Many Cooks Spoil the Broth." Eventually, you'll come up with something that looks like an acceptable document. Then you vote for acceptance or non-acceptance, but not for changes (to many cooks again).

When the group that is working on the legislation package feel they have the majority vote, it is then put into acceptable (legalese) terms to be adopted by federal, state or local authorities.

When you get down to it, there's not a lot of people that make up the legislation. The secret is knowing that the majority of the people are behind the legislation. We cannot have everything we want in legislation, but can we agree with the majority of what it says.

I look at it this way. How bad can it be? The people that are putting the legislation together (hopefully locksmiths) are not going to cut their own throats. How can they cut mine? If it's good as they are. These are not

people that work out of dirty little Volkswagens going from car dealer to car dealer offering dirt cheap deals on rekeys. These are people who have established businesses. People with ethics and a sense of fair play whom I consider leaders of our industry. We should trust them. We spend most of our time trying to earn our customers trust and respect. Why can't we trust each other, we want the same things!

Ask members of any local association what they want or expect from their association, and the majority will say education - technical. Well that's all well and good, but we also need advertising, business management, public relations, insurance requirements, or even ethics as it relates to locksmiths. In general, locksmiths see this as boring, most are interested only in the bottom line. And that's how we got here. Full circle. Again, we helped send locksmiths out into the world only half prepared.

When I joined the various locksmiths associations it was for reasons as varied as my customers. Each organization is different, and each one has their strengths and weaknesses. Just as locksmiths specialize in certain fields, so do trade magazines and associations.

ALOA emphasizes education, news, guidance, national convention, opinions from locksmiths across the country.

Trade Magazines emphasize education, both general and specialized, news, advertising, opinions from locksmiths across the country.

Local Associations emphasize education, fellowship, sharing opinions on a personal level, knowing your competition on a one to one basis. Not for cutting their throat but to learn what others like you do with their business. To look out for each

Continued on page 101

NEWSMAKERS

New Products and Industry News

Advanced Videotech's MicroTalk

Advanced Videotech's MicroTalk EM transceiver shrinks 2-way technology into a 4"x2x1-1/2" shirt pocket unit while maintaining the power and features of larger portables.

The MicroTalk features ten convenient synthesized channels and 1 to 5 watt selected output in the VHF and UHF bands.



The channel number LCD display is illuminated for use in low light conditions and the push button channel scan operates automatically to help you locate specific users.

MicroTalk's other features include busy channel lockout, TX/RX signal strength indicator, battery saving circuitry, low battery indicator, and wide bandwidth frequency capability.

For FREE Information
Circle 205 on Rapid Reply

New Low-Cost STI "Stoppers®"

Two new Mini Theft Stoppers® are being announced by Safety Technology International Inc. of Waterford, Michigan. Both feature a "stop sign" design which STI says in itself helps to deter mischief.



The STI Mini Theft Stopper for Cabinet-Mounted Units (STI 6251) is said to be highly effective for a wide range of applications. It can be used on a fire extinguisher cabinet door or cabinets housing fire hoses, sprinkler shut-off valves and so forth—as well as on gun cabinets and medicine cabinets.

STI's new Mini Theft Stopper for Free-Standing Fire Extinguishers, Etc. (STI 6252) also features a "stop sign" shape to help deter theft and vandalism. The device comes with a special clip that is placed on the fire extinguisher pin to prevent malicious activation of the unit while attached to the wall.

For FREE Information
Circle 206 on Rapid Reply

Matrix HS Duplicator By Silca

Silca Keys USA is proud to announce their new, global, MATRIX line of High Security Key duplicators with a world of innovations. These machines are more user friendly and were designed to take the guesswork and difficulty out of duplicating Laser/Sidewinder High Security keys for Mercedes, BMW, Lexus and others, as well as High Security Dimple Keys.

This new line of machines features modern design, ergonomic works, electro-mechanical calibration, use of roller bearings for optimal stability, interchangeable face plates, semi-automatic laser key duplication, duplication of Fichet keys, depth adjustment dial, built in light, built in guard, and a built in tool compartment. The SX model also offers tilting jaws with degree scale for angular dimple keys and spring loaded tracer point and the SLX model offers self centering chucks for faster cutter changes and a two speed motor.



The end result is a truly remarkable engineering feat allowing these machines to be efficient, accurate and very simple to use with a degree of comfort, features and performance that no other High Security duplicator can match. In addition, all of the decoders, code makers, and accessories available for use with the Club and Club Jr. machines in the past also work with the MATRIX series.

For FREE Information
Circle 207 on Rapid Reply

New Keys By Jet Hardware

The July catalog supplement No. 193.12 of Jet Hardware has announced the immediate availability of three



new popular vehicle key blanks now available through your favorite Jet distributor. For the 1994 Ford, the plastic head #H67-PH. Two new motorcycle keys have also been added. They are KA15-NP (X106) for Kawasaki and YH38-NP (X77) for the Yamaha.

For FREE Information
Circle 208 on Rapid Reply

New Single System Pin Kits From Corbin Russwin

Corbin Russwin announces four new single system



pin kits (PK-70 Series) for persons who only maintain on System 70 keying system. Each kit contains complete combining information in a handsome wood case. Pins are arranged in a new, easy-to-use format. For Corbin Z Class and Russwin D and H series keyways, use kit PK-70-ZDH. For Corbin X Class, use PK-70-X. For Russwin N Class, use PK-70-N. These three kits handle standard, master ring and I-Core cylinders and include both diameter plug followers and a key gauge. The fourth kit, PK-70-HS is for Emhart High Security.

For **FREE** Information
Circle 209 on Rapid Reply

New Masterkey Systems By DLA

DLA Security Systems Inc., Westfield, NJ, is pleased to announce the release of MULTI-MASTER 6.0 and MULTI-CORE 4.0 Master Keying Software.

MULTI-MASTER 6.0, for standard cylinders, has a database of 20 of the most popular manufacturers.

MULTI-CORE 4.0, for interchangeable cores, has a database of all major IC manufacturers, including Best A2 and A4, Medeco, Corbin, Russwin, System 70, Sargent and Emhart High Security.

Both programs feature user-selectable progression sequence, tracking of master cuts used in previous systems, output of change key numbers in either standard alpha-numerical format or sequential format, system expansion, location

files and a location listing for clients.

MULTI-MASTER and MULTI-CORE will run on any IBM or compatible PC and are designed for both the experienced locksmith and the locksmith new to master keying.

For **FREE** Information
Circle 210 on Rapid Reply



Computer/Office Machine Locks By Qualtec

To keep virtually all office machines safe from theft, Qualtec Data Products offers Steelguard I, a heavy duty, anti-theft security device. And Lok-Kit II is a cost-effective, low-end solution to computer theft.

Steelguard I uses four rubber bonding feet that are permanently affixed to the bottom of a PC or business machine with Qualtec's Super Bond system. The feet

are then locked into two metal encasements. The encasements are mounted to a work surface using adhesive and/or screws. All the necessary components are provided, and Steelguard is available master keyed and keyed alike.

Lok-Kit II is the most versatile and innovative theft deterrent available. It features cast metal plates with vinyl surfaces that are attached to PC's or office machines with Super Bond adhesive. A 5' cable is weaved through the plate, bonded to a surface,



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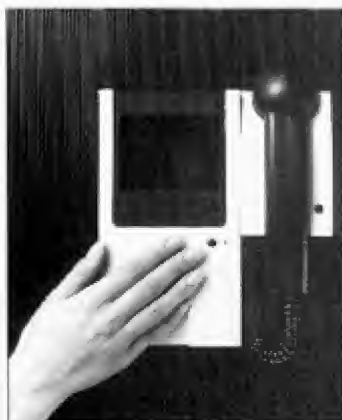
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Farfisa Intercoms

Farfisa Intercoms has a line of compact, multiple function intercoms which can easily be installed by the locksmith. In addition to ready-to-install audio kits, the company offers flat-screen video/audio intercoms featuring unlimited entrances, unlimited monitors and



handsets, a door release button and aluminum door panels.

For **FREE** Information
Circle 213 on Rapid Reply

Security Lock Distributors To Offer Aiphone Intercoms

To meet the increasing demand for access control intercom systems, Security Lock Distributors is stocking the broad line of Aiphone Audio and Video Entry Security Intercoms. Simple to use and easy to install, these intercoms are a natural complement to any security installation by answering the key question of who is at the door.



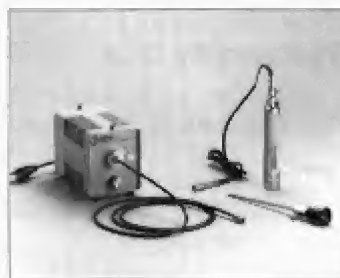
Security will maintain in-depth inventories of audio speaker-type answering sets, audio handset systems, door answering telephone systems, door sentry sets and video sentry sets including motorized panning and tilting door cameras. As with all lines which Security stocks, complete "down to the smallest part" inventories will be maintained at all times.

For **FREE** Information
Circle 214 on Rapid Reply

New MDS Borescope

MDS of Brandon, Florida, announces the release of their new rigid prism borescope with a corrected field and adjustable focus.

The new PS100 is available in both 26 degree and 60 degree wide angle views. The outside diameter of these stainless steel probes is 5.5mm (just under 1/4"). The total working



length is either 6.2" or 12", powered by MDS's 30 watt krypton portable light source or their 150 watt halogen illuminator. The state-of-the-art borescope is now available for immediate resale.

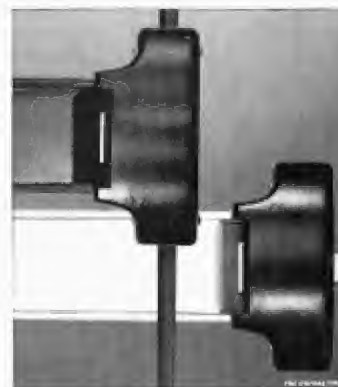
For **FREE** Information
Circle 215 on Rapid Reply

American Device 8000 Series Exit Device Brochure

A four-page brochure from American Device Manufacturing Co. describes the company's new 8000 Series line of U.L.-listed panic- and fire-exit devices. The 8000 Series offers an economical answer to life safety and ADA requirements, according to the manufacturer.

The brochure provides complete information on the 8000 Series rim (8300) and surface vertical rod (8400) configurations. Trim options, finishes, technical and ordering information are also provided.

American Device, a member of The DORMA Group, manufactures a comprehensive line of exit devices and accessories, security hardware and postal



specialties.

For **FREE** Information
Circle 216 on Rapid Reply

Smart Safe 2000 By McGunn

The McGunn Smart Safe 2000, an electronically-controlled, time delay safe which also serves as a cash vending machine, is changing the way that business operates. Through a user specific access code, the Smart Safe 2000 dispenses money, keeps track of the balance, and even has the ability to communicate in three languages — French, Spanish and English.

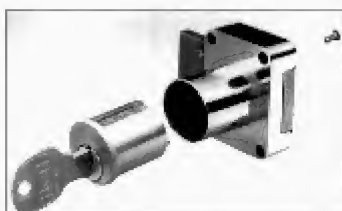


Unlike a combination safe, the Smart Safe 2000 is fitted with a time delay lock which means the safe is electronically set to open only after a certain amount of time has passed. The system discourages robbers who are known to want to make a quick escape after committing a crime and wouldn't wait 15 minutes for a safe to open.

For **FREE** Information
Circle 217 on Rapid Reply

National Cabinet Lock's REKEYABLE BOX LOCKS

National Cabinet Lock has a line of easily rekeyable pin tumbler box locks for doors and drawers. These dead-bolt, surface-mount locks use a 7/8" hole and are available in a range of cylinder lengths.

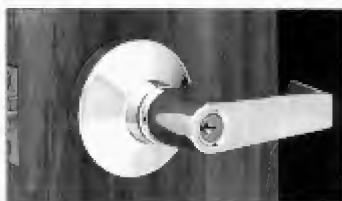


The box locks are designed with the National Cabinet Lock "Advantage Plus" rekeying feature. A 5/64" allen wrench is all that is needed to remove the cylinder and plug for rekeying. This saves time, especially during multiple rekeying jobs, because the cylinder can be repinned and reinstalled without removing the entire lock from the structure. The key is removable in either the locked or unlocked position. Keying uses the D4291 blank, with masterkeying to GM1.

**For FREE Information
Circle 218 on Rapid Reply**

PDQ's Spirit

Bill Tell, President, and Paul T. Kosakowski, V.P., Sales and Marketing, announce the introduction of an addition to the PDQ line of quality commercial grade locksets, the all new, extra heavy duty ST Series, Grade 1 Spirit.



The extra heavy duty Spirit lever lock complies with ANSI A156.2, Series 4000, Grade 1, and exceeds all Grade 1 requirements for both torque and cycle testing. The Spirit meets all applicable accessibility requirements of the Americans with Disabilities Act of 1990.

The new Grade 1 Spirit features independent spring support of the longer, 5-1/2" solid die cast Philadelphia style levers, and full retraction

requires under 40° rotation. To guard against lever sag, both heavy duty spring-in-the-rose construction and standard thru-bolt mounting has been incorporated. The Spirit is available with interchangeable core, as well as in the keyways of all other manufacturers. Other new features include a new, extra heavy duty Grade 1 latchbolt with 9/16" throw and standard through-the-door thru-bolting.

**For FREE Information
Circle 219 on Rapid Reply**

Gyyr's Two New Products for Mobile Security Applications

Mobile security moves into the fast lane with two new products for Gyyr, and Odetics division. Gyyr introduces the first video communications system that sends color or black & white video via cellular telephone and a 24 hour time-lapse recorder that uses standard 12-volt batteries.

FasTrans2000 Cellular™ is the only product on the market that sends continuous high-speed, color and black & white transmission of an entire monitored scene over a cellular telephone network. With FasTrans2000 Cellular, video images can be sent via cellular hook-up at 2-to-3 frames per second for low-resolution and up to 20 seconds per frame for high-resolution.

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New Door Tool Catalog by Norfield Tools

Norfield Tools and Supplies' announces its 1994/95 Door Tools Catalog. Its first Catalog just for door tools, Norfield offers a range of products from its Basic Door Prehanging Kit to hardware installation tools for commercial doors. It also includes a variety of products by Norfield, DoorTech,



Porter-Cable, and others.

Norfield designs and manufactures many of the specialty tools and supplies found in the catalog. These Products include the Hingemaster that mortises doors and jambs simultaneously, the Strike Master and T-Master that prep strike jambs and plates, and the Pocket Master that's used to make mortises for lock bodies. In addition, the catalog carries supplies for Norfield's heavy-duty door machines, including the Magnum, Tradesman, and other machines.

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Maxton Movable Lock System

Maxton Lock Company Inc. introduces the Maxton Cable Lock, a security device that guards against theft of office machines and small computers, yet allows the equipment to move freely.

The new Model MIC secures equipment with a 5", vinyl-covered aircraft cable and pick-resistant, free spinning lock. Both the cable and lock attach to a desk or table leg to avoid drilling on work surfaces. Unlike stationary locks, the Maxton Cable Lock allows machines to be easily moved, yet provides maximum security.

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Dedicated Micros' Computerized Catalog

To ease the job of security system specifiers, Dedicated Micros (DM) introduced the

specification catalog on computer diskette. The Dedicated Micros Product Specification Guide will be available at no cost to architects, engineers, as well as other specifiers and system integrators.

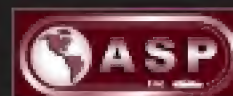
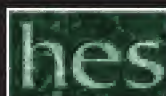
The guide includes specs on DM's Uniplex and 4Plex-QK video multiplexers, and their DVST digital video storage transmission systems. The video multiplexers collect continuous full picture sequences from all cameras simultaneously, then process the sequences to record onto a single videotape. The DVST DFT-0100 and DFT-0200 use digital video storage transmission compression technology to transmit and receive broadcast quality color or monochrome images over either standard telephone lines, Integrated Services Digital Network (ISDN) lines, switched 56 kilobyte lines, fractional T1 and T2 line, or cellular lines.

**For FREE Information
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Recently introduced by *The National Locksmith* is the National Locksmith Automobile Association, or NLAA. The NLAA is an organization devoted to helping locksmith members keep abreast of the ever changing world of automotive locksmithing.

Membership includes a subscription to the NLAA quarterly newsletter, bi-monthly technical mailings with specifications on challenging cars. Also included is access to the NLAA Code & Car Hotline where members can get instant answers to most any automotive problem. The first 500 members will be enrolled as Charter Members, receiving a free copy of the 500 page Silca Car Book. Charter Memberships are still available though they are going quickly. See pages 88-89 for more details.





THE CORBIN RUSSWIN CK4400

Test Article #67

by Giles Kalvelage

As a manufacturing company, Corbin Russwin has undergone some changes within the last few years. In recent years, Corbin and Russwin were individual companies within the larger Emhart company. Although keyways and part numbers differed, the actual components of Corbin and Russwin products were often identical and could be used interchangeably. In the early 90's, Emhart decided to merge the divisions of Corbin and Russwin into one, changing the name to Corbin Russwin. Corbin Russwin was extremely locksmith friendly, shipping to locksmiths virtually any up-to-date service and technical information for any of their product line for the asking. In 1994, ownership of Corbin Russwin changed to Yale.

The CK4400 Series lockset, described by Corbin Russwin to be Standard Duty, is a Grade 2 lockset best used in heavy duty residential and light duty commercial applications. The CK4400 series has also been known as the Corbin 6600 Series and the Russwin 3400 Series.

The CK4400 Series Lockset is available in all the standard functions:



1. Depressing the knob catch to remove the inside knob.

backset is normally 2-3/4", but other backsets are available using either a 2-3/8" backset latch or backset extensions to extend the backset to 3-3/4" or 5".

Installation

The lockset mounts into a standard door prep with a 2-1/8" lock case hole and a 1" latch hole. The edge of the door should be mortised to accept the face plate of the latch or deadlatch. The

To install the lockset into the prepared door:

- 1.) Install the latch into the side of the door.
- 2.) Using a probe or the Corbin Russwin tool supplied, remove the inside knob of the lockset by depressing the knob catch on the inside spindle and pulling inside

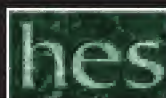
Continued on page 20



2. Properly adjust for door thickness and place into door prep making sure the latch engages correctly with the lock body.



3. Turn the outside knob so that the retainer can be seen in through the release hole.



Continued from page 18



4. After removing the back cover the cylinder can be removed from the knob.



5. Use a pliers to gently bend the chassis housing tabs.

knob off. (See photograph 1.). Remove the inside rose and mounting plate. If the rose and mounting plate are connected, separate them at this time.

3.) Adjust for door thickness by rotating the outside rose so that the latch will fall in the center of the retractor slot when mounted on the door. The lockset should be properly adjusted when the inside surface of the rose is one half the distance of the thickness of the door from the center of the retractor slot. The template packaged with the new lockset provides an excellent aid in

this adjustment. If no template is available, a ruler or tape measure can be used.

4.) Install the lock by inserting the lockset from the outside of the door to the inside. Make sure the latch tails of the latch properly engage in the lockset's retractor and the lock case slides over the latch tabs. (See photograph 2.)

5.) Install the inside mounting plate with the two machine screws provided.

6.) Snap the inside rose over the mounting plate.

7.) Snap the inside knob over the inside spindle. It is not necessary to depress the knob retainer during assembly.

Outside Knob Removal

Should it be necessary to remove the outside knob to change the hand of the lockset or to rekey the cylinder:

1.) Insert the key, unlock the lock and turn the knob approximately 45 degrees clockwise to expose the knob retainer with the hole in the spindle. (See photograph 3.)

2.) Hold the knob in position, turn the key approximately 45 degrees counterclockwise. The key should stay in that position without being held.

3.) Depress the knob retainer with a probe and pull the knob off of the spindle.

Note: To change the hand of the lockset, simply rotate the knob assembly 180 degrees, insert the knob onto the spindle until it stops. Turn the key about 45 degrees counterclockwise, push the knob again until it snaps into place.

If the cylinder must be removed from the outside knob for rekeying or servicing, a knob cover removing tool is available through Corbin Russwin. If one is not immediately handy, the cover can be removed by massaging the cylinder through the knob until your fingers can gently grip the cover. A twisting action aids the removal of the cover. The cylinder will now slide out of the knob. (See photograph 4.)

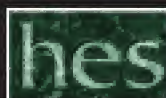
Lockset Disassembly

1.) Remove the lockset from the door or box.
2.) Remove the inside and outside knobs as described earlier.

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6. Remove the chassis housing.



7. If the mounting blocks don't fall out after removing the chassis housing, remove them now.

3.) Remove inside and outside roses. The outside rose will unscrew from the outside rollback assembly (spindle) once the outside knob is removed.

4.) Gently straighten the securing tabs facing toward the inside of the Chassis Housing. (See photograph 5.) Remove the Chassis Housing by pushing it rearward. Sometimes a well placed screwdriver wedged between the Chassis Case Assembly and the Chassis Housing can make this step easier. (See photograph 6.) The mounting blocks lie underneath the Chassis Housing and may drop at this time. Otherwise, remove them with your fingers. (See photograph 7.)

5.) Unsnap the Chassis Case Assembly from the front Chassis Cap Assembly. Be careful as this will expose the Retractor Springs and Retractor Spring Retainer. (See photograph 8.)

6.) The Retractor, Retractor Springs, Retractor Spring Retainer as well as the inside Rollback Assembly (spindle) will almost disassemble themselves at this point.

7.) The Linkage Bar Assembly (turn button assembly) will slide out of the inside Rollback Assembly when the nylon bushing is pushed off of the knob end of the Rollback Assembly. (See photograph 9.)

8.) From the outside, the Auxiliary Rollback (cam) will slide out from the Outside Rollback Assembly (outer spindle).

9.) The Outside Rollback Assembly will slide out of the Chassis Cap Assembly.

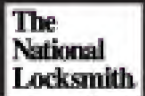
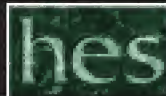
Keying

Keying for Corbin Russwin can

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8. The retractor assembly.



9. Removing the turn button assembly.

seem confusing because of the changes made throughout the century. Corbin Russwin describes six stages of keying systems based throughout their history. Most of the keying systems are still available today as some very large keying systems generated near the beginning of this century are still in use and need to be maintained.

Stage 1: Corbin and Russwin lock divisions each maintained their own plug diameter until 1959. Corbin's plug diameter was .509" as was Russwin's padlock line which was manufactured by Corbin. Russwin's plug diameter was .552". These were the X Class keyways.

Stage 2: Corbin Z Class keyways were introduced in 1959, using the same .552" diameter plugs as Russwin. The older X Class continued to use .509" diameter plugs for all locks.

Stage 3: In 1964, the round interchangeable core was introduced - replaced by the figure 8 interchangeable core in 1971. The plug diameter of the interchangeable core is .509".

Stage 4: Corbin X Class changed its plugs diameter to .552" in 1983 excepting the padlocks, interchangeable cores, and master ring cylinders.

Stage 5: In 1986, .509" diameter plugs became the standard with the CK4400 Series locksets. New products were to be designed using the .509" diameter plugs. Existing products were to maintain their existing plug diameter. Today, all key-in-lever cylinders, CK4400 Series key in knob cylinders, conventional interchangeable core, PL5000 series padlock cylinders, X Class master ring cylinders for the CK4200 and UT5200 Series and all Corbin X Class keyway

cylinders before 1983 use the .509" diameter plug cylinder.

It is the intent of Corbin Russwin to eventually standardize all plugs to the .509" diameter plug except for the high security interchangeable core cylinders.

Why is this important? Because bottom pin lengths will differ when combining a key with the same biting between a .509" and .552" diameter plug.

Bitting Classes

A bitting class is a major grouping of keys based on the height of the keyblade and the key bitting dimensions. Corbin had only the X and Z Bitting classes, while Russwin has six bitting classes. In 1993, Corbin Russwin decided to follow the Corbin Z Class specifications.

Depth Systems

Before 1970 Corbin and Russwin used a ten depth system. Corbin's depth increment was .014", from 1 to 0 (10), while Russwin used a .015" increment, from 0 to 9. These systems are now known as Pre-System 70 or Non-System 70. When developing a masterkey plan, two step increments will be used to assure a minimum step of .023".

In 1970, System 70 was introduced for both Corbin and Russwin. Depths are labeled from 1 to 6. Because the System 70 has an increment of .028", single step progression can be used in developing a master key system, thus allowing for theoretically a larger number of change keys within the system. (See Table 10 for System 70 Space & Depth.)

Table 10: Space And Depths

The factory has provided the following pin length dimensions. Although the factory consolidated pin lengths when possible, they are always within .002". Because there exist ten different keying specifications for Corbin Russwin locks, only the Corbin Z Class, Russwin D&H Class, System 70 is listed.

Corbin Z Class, Russwin D&H class - System 70

Keyblanks: Corbin 60, 70, 59A1 through 59D2

Russwin D1 through D4, H1 through H8

Increment: .028"

MACS: 4

Blade Height: .343"

Shoulder to Center of First Cut: .250"

Cut to Cut .156"

Depth	Root Depth	.509" Plug Bottom Pin	.552" Plug Bottom Pin	Master	Top Pin
1	.339	.160	.203	.028	.170
2	.311	.189	.231	.056	.170
3	.283	.218	.259	.083	.170
4	.255	.246	.287	.112	.170
5	.227	.273	.315	.140	.170
6	.199	.301	.345	-	.170



MERCEDES SL600, PART 2

Test Article #68

by Michael Hyde



1. The door panel on this Mercedes model does not use the hook style panel retainers.



2. Remove the trim plate on the edge of the door.

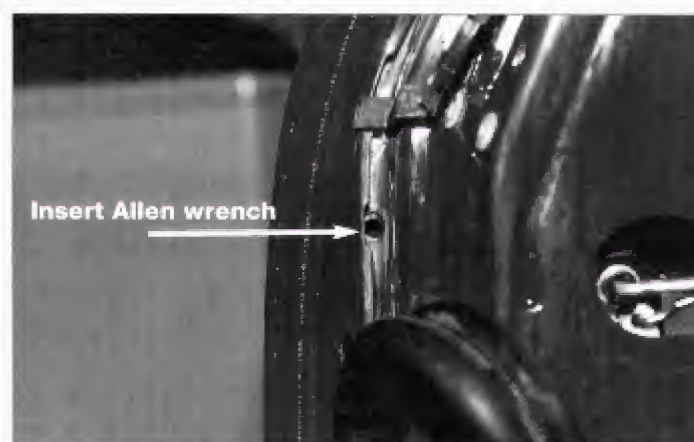
This month we continue servicing the Mercedes SL600

Door Lock

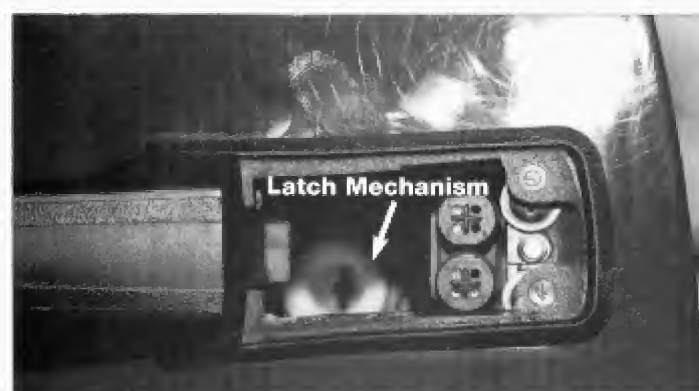
Mercedes has been known for their hook style door fasteners. Recently, however, Mercedes has stopped using the lift-up hook type of door panel fasteners and now use pushpin type of door panel fasteners. (See photograph 1.) Due to this and other design changes, it is now not necessary (on this model) to remove the door panel in order to remove the key cylinder if you do not have a working key.

To remove the door lock, remove the chrome trim plate as seen in

photograph two. Next, separate the rubber weatherstripping on the edge of the door, and insert a 4mm Allen wrench into the access hole. (See photograph 3.) Loosen the retaining screw and gently wiggle the door cylinder module out of the car. Be patient as this module fits in place very tightly. It may take



3. Separate the weather-strip from the edge of the door and insert a 4mm Allen wrench.



4. With the door lock removed the vertical latch mechanism can be seen.



5. The door lock showing the infrared module and the vertical wing tip tailpiece.



6. Removing a single tension pin releases the tailpiece, while pushing out two pins removes the infrared module.

a couple of minutes to gently work it out. On previous chassis's the door lock tailpiece and the latch mechanism interlocked and it was necessary to turn the key 45 degrees to remove the door lock. In this model, however, while the tailpiece still has a wing tip, it no longer interlocks into the latch assembly.

With the door lock removed you can see how the latch opening mechanism for the lock tailpiece is vertical. (See photograph 4.) Photograph five is a look at the door cylinder with the infrared module

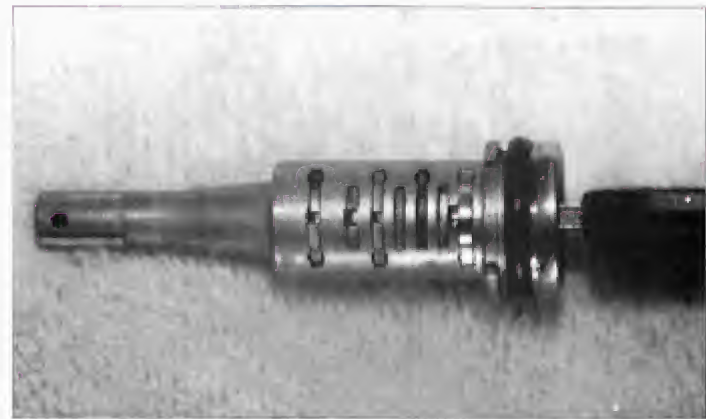
attached. Notice how the tailpiece has a vertical wing tip to it.

The tailpiece is held in place by a single tension pin and is easily removed. The infrared module is also easily removed by just pushing in on the two tension pins. (See photograph 6.)

Photograph seven shows the door key cylinder plug with the tumblers and working key.

Trunk Lock

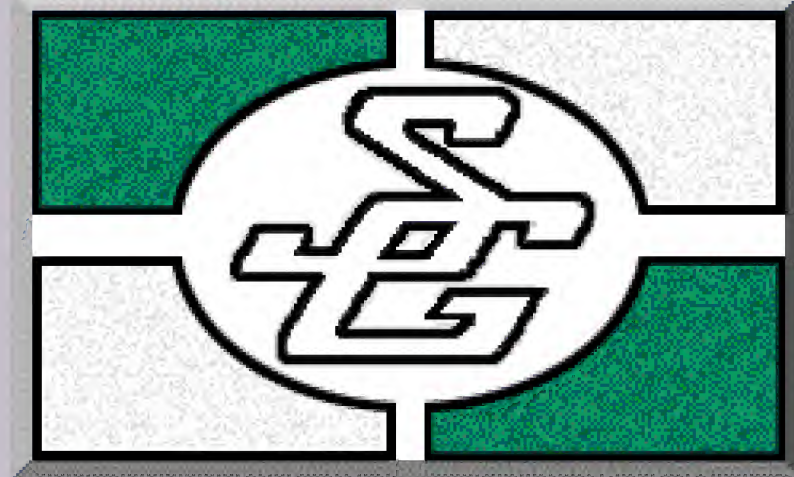
Photograph eight shows the location of the lock cylinder and



7. The door plug.

infrared module unit on the trunk lid.

For the purpose of this article I am using what is called a 'workshop' edition of the trunk lock, the servicing of the installed lock cylinders is the same. The workshop edition is a unit that is sold without the alarm module, and is coded to a random 4-track code. The workshop edition is what the dealer will usually carry on their shelves for replacing a damaged or defective lock right away and then wait for the new (matched to the car) lock to come in. Mercedes has workshop locks for the ignition, doors,



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8. Trunk lock and infrared module.



9. The 'workshop' version of the Mercedes SL600 trunk lock.



10. The trunk lock disassembled. The medium sized snap ring must be removed for plug removal.



11. The trunk plug and tumblers.

and trunks. (See photograph 9.)

To service this lock start by gently prying out the large facecap. Next remove the C-clip, plastic tailpiece and tailpiece springs from the back. Then lift out the tailpiece hub. There is medium size retaining ring that must be removed in order to slide out the key cylinder plug. This is not an easy task. The retaining ring is recessed into the lock housing and is almost impossible to remove with conventional tru-arc type pliers. (See photograph 10.) Photograph 11 is a

view of the trunk cylinder plug, removed from the housing.

Console Lock On dash

The console lock is also the control for the interior locking system. When you lock the dash console lock with the master key, it locks the dash console, door armrest storage compartments, the center console and tape/CD storage compartments. (See photograph 12.)

To remove the cylinder, insert master key and rotate to the right 45

degrees. Then insert a round wire pin (diameter 1.5 mm, minimum length 45 mm) into the access hole on the face of the lock. This releases the retainer for the lock cylinder and the lock plug can be pulled out of the housing with the master key. (See photograph 13.)

Next month we will finish the Mercedes SL600 by covering key generation procedures.



12. The console lock.



13. The console plug removed.

ELECTRONIC SECURITY

WIRING PULLING TOOLS

Test Article #69

Next to the fear of electricity, the fear of running wire is probably the single most common reason that some locksmiths are not doing access control. Not having the right tools, knowing the correct techniques, and not knowing what to expect from a wall or ceiling creates a wall of intimidation that most locksmiths are just beginning to address.

Unlike residential and commercial high voltage installation, a high proportion of access control and alarm wiring is not run through conduit. In fact, a significant amount of low voltage wiring is run through wall cavities, over ceilings, through door frames, etc.

Before doing any installation, however, check with local building codes. There has been a move by many cities to require even low voltage wiring to be run through conduit or some other metal raceway.

Because running low voltage wiring can sometimes be a challenge, through the next few articles we will try and show some of the tools, wall and ceiling structures, and installation conditions that a locksmith will typically run into while doing electronic security work. This article will cover just a few of the tools that are needed and available for making the job easy and installation successful.

For more information on installation tools try contacting a locksmith distributor that offers electronic equipment and supplies. Or, stop in and visit a local alarm supplier such as Arius and Alarm Distributors, Inc. (ADI). Most of these places have showrooms where you can see the tools and representatives that can help you find the correct tool for any given application.

While many tools exist, they typically fit in one of three major categories based on their use: drilling, retrieving, and fastening.

Drilling, obviously, involves drill bits. Their special use here is not necessarily the type material it is meant to drill (metal, wood, concrete, etc.), but rather the condition under which the drilling must be done. Many jobs require drill bits that are not only extremely long but are also able to make bends.

Once a hole has been made for wire to enter a wall or ceiling, there needs to be some way of feeding it towards its intended destination. This, of course, necessitates the need for different pulling and retrieving tools. Wall cavities are often filled with insulation and may require the use of one type tool. Hollow wall cavities can use still others. Pulling or retrieving wire long distances over ceilings can also be challenging.

Finally, once wire has been pulled it needs to be properly fastened to the surface over which it is running. Fasteners vary with the type of surface they are

being fastened to as well as the size and number of wires being run.

Drills

Drilling for varying conditions demands an assortment of drills. First there are varying materials to drill, such as concrete, metal and wood. Second, because most installations are



1. The drill bits used by the electronic locksmith vary by more than just the type of material they are used on. Here a couple of commonly used long bits are displayed.



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done in the post construction stage of a building, longer specialty bits must be used to reach the different areas being drilled. In many cases these drills are just standard drills attached to long rods.

When mounting an electrical unit to a door, for example, power must be run from the hinge edge of the door to the electrical unit on the latch side of the door. In order to run the wire, a hole going from the hinge side of the door to the electrical unit must be made through the center of the door. In this case a long, thin, rigid drill must be used, that is typically in excess of 48" in length. (See photograph 1.)

When drilling a wood door in this manner it is very important to start correctly. The drill should be centered and pointed at the correct angle for completing the hole. If not, you may find the drill exiting the face of the door or splitting the door's veneer. Neither of which are acceptable and both of which are expensive.

The ease and accuracy of the drilling is determined by how well the drilling is started. If the starting angle and center point is off just a bit, trying to correct the direction and path of the drill later in the process is very difficult. In fact, it often means starting from another point on the door or drilling from the opposite side of the door.

To facilitate drilling, place a line of tape along the face of the door from the starting hole to the exit hole. This shows the proper angle for the drill.

As starting is most important, use a centering tool, if possible, to hold the drill center and square to the edge of the door. Use a standard length drill bit, generally 1/4" or 3/8" diameter, to attain the correct center point and angle. Once this pilot hole is complete, attach the longer drill bit and begin drilling. Drill only a few inches at a time, pulling it completely out of the door to remove the wood particles. Be patient. (See photograph 2.)

Another popular bit, the D'versi-bit by Greenlee Mfg., has a standard drill bit welded to the end of a long thin metal shaft. This shaft is thin and resilient enough for the user to apply a



2. This drill is fit with a centering jig (this model is discontinued) to keep the drill straight. Notice the tape on the door, used to help direct the drill.

bend or flex to it during drilling, allowing the drill to make a single 90° bend in a rather small radius. With enough experience an installer can easily drill vertically through to a basement, up into an attic, through a door header, or horizontally through the studs of a wall. (See photograph 3.)

To use the D'versi-bit, a starting hole must be made just large enough to allow manipulation of the drill end. The hole made in the wall is typically the wire access hole for the reader or control panel and is covered by the unit after being mounted.

After a hole is made, the drill bit is inserted into the wall cavity and directed by hand or, preferably, by use of the Greenlee #712P placement tool. The tool is simply a 120° hook with a

handle attached. Once inserted through the hole and attached to the drill shaft, the bit can be directed in the proper direction.

Another characteristic of these specialty drills is the presence of a small hole at the tip and shaft end of the bit (some drills may have only one hole). These holes are used to attach a retrieving line or the wire to the drill. In use, once the drill breaks through to its designated point, the line or wire is tied to either hole on the drill. The drill is then pulled from the wall, bringing with it the line or wire. (See photograph 4.)



3. The D'versiBit and its accompanying placement tool can make the impossible happen. Notice the 90° bend made to drill through the studs in this wall.

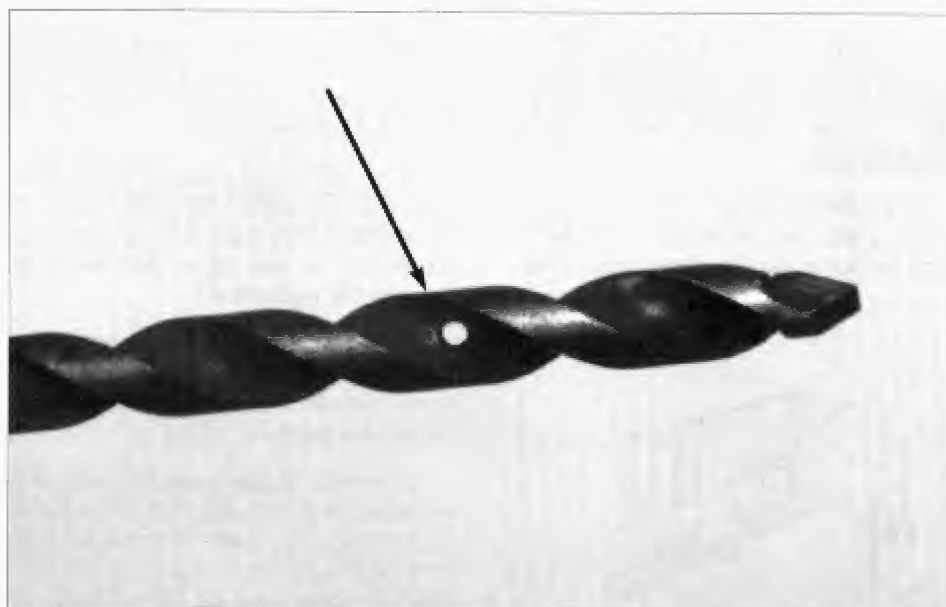
Next month we'll cover some of the retrieving and fastening tools and supplies needed for access control work.



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4. Many of the drill bits include a small hole in the tip and/or the shaft end to attach and pull the wire.

BEGINNER'S CORNER

Qualtec Accessory Locks

I was impressed with the computer security products shown to me by Dawn Miller of Qualtec Data Products.

This is an area of security that most locksmiths do not think about, but is ideal as an additional service.

When my neighbor's car was stolen out of the driveway, I worried that someone would break into my house and steal my electronic equipment and computer. Now that I have secured the computer, monitor and printer with a Qualtec locking device, the worry is gone.

One out of three American households already has a computer. That is a total of about 32 million computers. Experts say that this is just the beginning and that demand will increase because prices are falling, more people are working at home, and computers are easier to hook up.

When you add all the home computers to business and schools, some that have numerous computers, it looks like a great opportunity for security.

In fact, today, in a social visit with a computer teacher aid at a community



by
Eugene Gentry

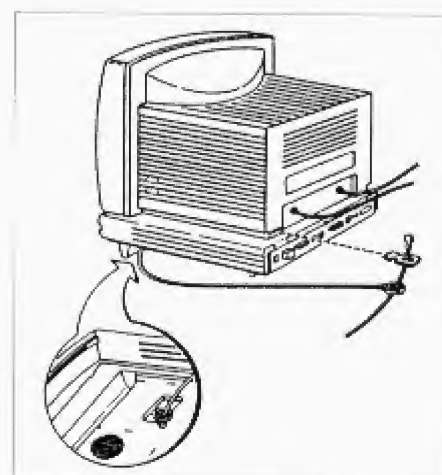
college, I learned that the college has over 100 computers. The only security they have is guards, and they can't be everywhere at the same time.

Qualtec offers a general purpose security kit, Lok-Kit II, part #06401, putty color, or #06402, black color. This kit provides asset control and deters opportunistic theft. The kit is simple to install. Three plates are provided that are attached with an industrial strength bond to the computer equipment, then to a desk or permanent object. The cable is weaved through the plates, and locked in place. This unit is available with keyed alike or masterkeyed locks. (See illustration 1.)

This general purpose kit can also be used to secure fax machines, copiers, phone systems, televisions, or VCR's, and retails for \$29.95 plus installation.

Another product offered is the Steelguard I part #11002. This is a heavy duty anti-theft security product, ideal for PC's, laser printers, fax machines and copiers. This unit secures your computer equipment to the work surface with metal encasements. The suggested retail price is \$89.95. As with all kits this one also comes keyed alike and masterkeyed.

A kit that I think is handy is the Cable Trap, part # 02002. This anti-theft device traps the peripheral cable



3. The Mac-Kit used on all Macintosh computers.

of your mouse, hand scanner or keyboard. It secures up to five cables, two large and three small. Suggested retail price \$24.95. (See illustration 2.)

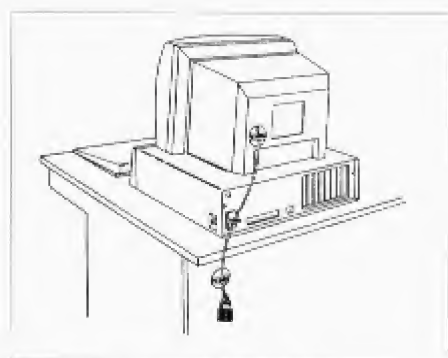
Locks available in the accessory products are keyed locks or resettable combination locks.

Another lock used specifically for Macintosh computers is the MAC-Kit, part #08117. This unit has a cable that is attached to the back of any Macintosh computer using a special clip. The other end is attached to the desk or table. The cost of this unit is \$39.95. (See illustration 3.)

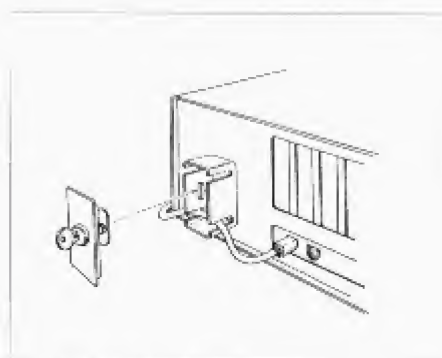
The most expensive kit is the Steelguard II, part # 11012 at \$119 and #11416 at \$139. This unit is mounted to the desk and uses two keys to remove the computer.

With all of the schools, businesses and residents owning computers, these simple lock devices are perfect for add-on sales.

Currently Qualtec security kits are available only through American Lock and Supply. For more information call American Lock and Supply at 800-844-8545 or call Qualtec Data Products Inc. at 800-628-4413.



1. The Qualtec Lok-Kit II



2. The Cable-Trap



SPECIALIZING IN PROFITS

Simulating the pattern of successful locksmiths means specializing

"Many of us have heard opportunity knocking at our door, but by the time we unhooked the chain, pushed back the bolt, turned two locks, and shut off the burglar alarm — it was gone."

For many locksmiths the adage — "I'm a day late and a dollar short" — is more than an adage; it has become a way of doing business. The dreams that once inspired the locksmith to perfect his trade skills and increase his knowledge are gone and work has been reduced to the daily grind. Like fishermen, he reflects on the opportunities that got away.

The reason for this, of course, is an errant understanding of opportunity. For some, it's nothing more than a hope, a wish, a chance, like betting at a racetrack. For others it's an occasion to take advantage, a time to advance in skills, knowledge and income. The difference between the two types of locksmiths lies only in their understanding and perception of opportunity.

First, it must be understood that opportunity is not some mystical, randomly occurring set of events (fate?) that happens to drop money off in your pocket; that's luck. Opportunity is calculated, it is measured, it is understood. Opportunity is not free, it requires hard work, planning and time; its fruits are not grown overnight. Opportunity, in its essence, is being able to identify those circumstances and events that surround you and using them to your benefit.



1. Hardware is the cornerstone of Andy Maglio's success. Andy is owner of Action Lock & Key in Roselle, Illinois.



2. Specializing in bank and safe sales and service have catapulted Bob McCown and Fink Safe & Lock to the top of Chicago's list of safe and vault locksmiths.

Recently, *The National Locksmith* spoke with four locksmiths, both shop owners and mobile, about their success. And while each of their stories are unique, their successes share common traits or elements in thought and direction.

These traits we noticed include a real enjoyment and pride in the work they perform; they know the needs of their community and market group; they desire to be the best at what they do; and they specialize in a particular area of locksmithing.

Of most interest is the impact that specializing has had on each of these locksmiths and their companies. While each used their specialty to expand other areas of their business, it was the focus on that one type of locksmithing that generated the initial customer contact and formed the customer base of their companies.

Andy Maglio, of Action Lock & Key, Inc., in Roselle, Illinois, for example, specializes in door hardware. (See photograph 1.) With 22 years as a locksmith, Maglio started Action Lock & Key in 1980.

"I chose hardware as my specialty due to customer demand and the customer's lack of product knowledge," said Maglio.

"Having hardware as a specialty has allowed Action to become a full-service locksmith company and to provide our residential customers with whatever product fits their needs.

"Our knowledge of hardware has also allowed us to become a major hardware distributor to some of the largest builders in the Chicagoland area.

"Many builders depend on our knowledge of product and product lines when planning new products. We are also able to fully service and supply the requirements of our commercial customers, which are very often custom in nature.

"By specializing, Action has become one of the largest and most successful locksmith operations in the suburban Chicago area."

Maglio states that the income potential for locksmiths who specialize in hardware will vary.

"Like anything else," he said, "you get out of a business only what you put into it. The potential lies in how hard you are willing to work."

For those locksmiths who want to specialize in hardware, Maglio offers this bit of advice: "A locksmith who wants to specialize in hardware must truly specialize in the brand of hardware they choose to bring into their place of business. Knowledge of product is the key."

Bob McCown, specializes in bank and safe work for Fink Safe & Lock Co. in Chicago, Illinois, and comes from a long line of knowledgeable and competent safe and bank men. (See photograph 2.)

Fink Safe started in 1920 at the hands of McCown's great grandfather Fred Fink, Sr., a vault erector and safe expert for MacNeale & Urban, later bought out by Mosler. Moving to Chicago, Fink, Sr. continued erecting vault equipment and doing safe openings as a private contractor for Mosler.

Five wars and four generations later Fink Safe & Lock Company is Chicago's major private installer of bank and safe equipment. Included in this family line of bank and safemen is McCown's great grandfather, Fred, Sr., his grandfather, Fred Fink, Jr., his father, John McCown, and his son-in-law, John Greenan; all have followed the very specialized field of bank and safe work.

Asked why safes were chosen as one of Fink Safe's particular specialties, McCown responds:

"Being fascinated with combination locks, and the service work we did, for financial institutions from back in my great grandfathers day to present, led us to commercial safe servicing. The sale of safes simply compliments the type of services and sales we are providing for the banks."

Like Maglio, McCown sees the income potential for locksmiths who want to specialize in safes as only being limited by desire and knowledge.

"It's like anything else," said McCown, "the more you learn and can handle, the more you are worth. Safe work normally brings in a higher hourly charge because of the amount of time it takes to learn, and the specialty equipment needed to do the work professionally. To make more money as a safe technician work must come in on a regular basis. One opening does not mean you are a professional safe cracker."

As last words of advice, McCown tells the locksmith to study.

"Be prepared to study every safe you service." He said. "Record important information whenever the opportunity arrives. Have the proper tools for the job. Get all the safe

information you can from the publications or any source available, including educational classes from local and national safe organizations, locksmithing organizations and educational institutions."

Electronic security has, for a long time, not been included as a locksmith's task. Yet, with the proliferating reliance on electronic security, many locksmiths have begun to specialize in this area. Matt Smitheman of T&R Safe And Lock in Silver Spring, Maryland is one who sees profits here.

"After enough customers asked if we knew anyone who did CCTV or access control work, we decided to fill the need with a full service security company. Our service is now call 'One call does it all.' And the marketing works great." Said Smitheman.

How much potential does Smitheman see?

"T&R came close to doubling its annual income by specializing in electronic security," He said. "By increasing your abilities you will increase your customer base. You will spend more time working and less time cleaning your van waiting for something to happen."

To get involved in electronic security, Smitheman also recommends education and training.

"First, contact your local electronic security distributor," he said. "Besides being a wealth of information in themselves, they can inform you of available training and product updates. Secondly, network with other electronic security businesses. As a locksmith you have abilities they don't."

Finally, we spoke with Michael Hyde of National Auto Lock Service, Inc., South San Francisco, California. Hyde specializes in auto service, has been a locksmith for seven years and has operated National Auto Lock Service for four years. (See photograph 3.)

Why did he choose automotive as a specialty?

"I like the ever changing product line of automobiles and enjoy working on them." Said Hyde. "I noticed a while ago that very few locksmiths work on all cars, from conventional keyways up through all the different types of high security systems now in place. Just like the old saying, 'Find a need and fill it.'"

Hyde also sees great income potential for locksmiths who specialize in auto lock service.

"The potential is excellent. I feel there is a shortage of locksmiths that can go up to any car or truck and be able to make keys to it or service it." He said.

As far as advice, Hyde offers these guidelines:

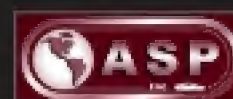
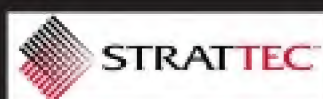
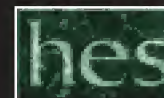
"Know the product line. Keep up to date on all changes. Use the most efficient and productive ways necessary to provide this service. And, offer a competitive price."

Taking these examples of successful locksmiths, enjoy what you do, know the needs of your community, strive to be the best, and specialize.



3. Clutching onto an opportunity, Michael Hyde of National Auto Lock Service in South San Francisco, California, specializes in auto locksmithing.





INCOME OPPORTUNITIES



Aable Locksmiths



The new GM 9 Wafer Ignition Lock Removal Kit, will enable you to remove the ignition lock in less than five minutes.

Best of all you will not damage lock.

So, just fit a key and replace the same cylinder.

With the cost of cylinders running from \$25 for the standard ignition to \$45 for the VATS, you can save big

bucks and make more profit fast and easy.

An update kit will allow you to do the 1995 S10, Blazer S/T and the Suburban C/K, which will have a thinner face cap.

All current kit holders will receive a notice of the updated model.

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Alarm Monitoring Services



If you aren't selling alarm systems to your customers, you're walking away from easy money.

Who is in a better position to talk to customers about their security needs?

Imagine doubling, tripling your income just by adding one product line - an easily installed low-voltage, electronic alarm system.

Once sold, at a profit, monitored alarm system continues to generate profits through monthly revenue paid by customers to you.

Alarm Monitoring Services does the monitoring, you cash the check.

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American Lock & Safe



The America key box will organize for inventory and key selection saving the Locksmith valuable time and money.

No key or can't find the key is a loss of time and money.

The ten removable panels will slide up or out for key selection.

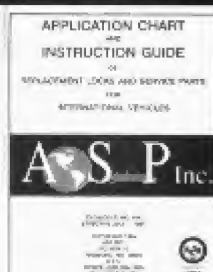
A total of 500 hooks each holding approximately 14 keys.

Constructed of 18 gauge metal and having a baked long lasting finish.

Top quality at a fair price.

**For FREE Information
Circle 447 on Rapid Reply**

The 1994 ASP Lock Application Chart



All of the information you need about replacement locks and service parts for Asian and European vehicles plus American Ford 10-cut locks is in the free 1994 Auto-Security Products Lock Application Chart.

This catalog contains over 1,100 replacement locks, keying kits, face caps, and service parts, listed by application.

Also included is a price list showing your cost, the car dealer's list price, and the estimated labor time, to help you maximize your profits.

**For FREE Information
Circle 446 on Rapid Reply**

The Locksmith, Door-Aid® & the ADA



Today's business climate dictates flexibility and diversification on the part of the locksmith in order to thrive.

Access control is one area and also automatic doors for ADA. Door-Aid® is such a product: both access control device and automatic door for the disabled.

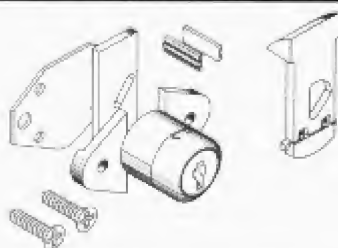
Selling one Door-Aid® is more

profitable than selling two buckets full of locksets and it takes less than two hours to install. Door-Aid® is receiving inquiries daily from colleges, architects and municipalities.

The B1000S is versatile and rugged, a perfect compliment to the Locksmith/Access Control dealer.

**For FREE Information
Circle 445 on Rapid Reply**

Fort Lock Diamond Back Wood Drawer Lock MFW-23008



Fort Lock, the originator of MULTI-FUNCTION® products, introduces the new patented "MFW 23008" Wood Drawer Lock. Purchases of this product qualify for the "Buy Fort Locks, Get a Free Waterloo Tool Box" year-long promo. The new lock is offered in 3 lengths (1-1/8", 7/8", 3/4") and two finishes (brass cap and stainless steel cap). Additional features, all in one bag, include dead

bolt or spring latch functions, 90° rotation with key removable or retained, and universal keyway allowing keying into all other manufacturers' key codes with reverse S millings. Buy one of each length and finish, and you will replace 24 different locks with just six. Available now at your Fort Lock distributor.

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JWT Corporation



The Original Door Stopper™ Super Lock is a new keyless locking device developed to supplement keyed deadbolts.

The Original Door Stopper™ made of 12 gauge steel, attaches to the door jam, not the door, in 10 minutes with three 4" screws using just a drill and screwdriver.

It is a very effective personal security product that cannot be kicked-off or picked.

The Original Door Stopper™ is easy to use and easy to install.

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Keysure



Key Minder a unique new customer service offered by locksmiths!

Keysure's patented key storage system allows locksmiths to physically store an emergency set of customers keys.

If a customer loses his keys, a spare set is always available, in the neighborhood at the locksmith.

A yearly fee is charged for this service.

Keysure's lockbox makes it all possible.

It requires a customer's signature, must be broken to gain access to the keys and prevents false accusations.

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Lockmasters



A profitable opportunity exists now, better than ever before, to extend your business scope to include the basic CCTV.

Closed circuit TV monitors and cameras are becoming as commonplace as master keys.

While your master keys system protects your clients from unwanted

entry through locked doors, a CCTV system will protect them from unwanted intruders.

Lockmasters®, Inc. offers a complete line of equipment at an affordable price.

Start increasing your profits today.

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Circle 441 on Rapid Reply**

Lori Lock



Lori Lock's new ADA Lever Conversion Kit is the first of its kind, and provides locksmiths with an important and profitable opportunity to convert knobs to levers in minutes.

Adapted to existing locksets, the ADA Lever fits both Schlage "D" and Arrow "M" heavy duty knob sets with spring loaded power cassettes and

levers; use existing chassis, latch and cylinders.

The kit gives locksmiths the sales leverage of a UL approved, heavy duty Grade 1 lockset at a fraction of the cost.

**For FREE Information
Circle 440 on Rapid Reply**

M.A.G. Engineering & Mfg. Co., Inc.



Consider the number of wood and metal doors in need of ADA lock compliance and reinforcement in schools, hospitals, offices, hotels, motels, and military bases.

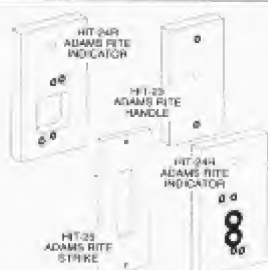
Expensive door replacement can be avoided and lock conversion problems solved by using a M.A.G. door reinforcing unit.

This product covers split and misdrilled wood and metal doors, enhances appearance, and more than doubles door strength.

It opens healthy profit opportunities for locksmiths.

**For FREE Information
Circle 439 on Rapid Reply**

Major Manufacturing Co.



With the new programs introduced by Adams-Rite, retrofitting their existing locks to accept additional hardware can be profitable, but also time consuming, until now. Major Manufacturing has introduced a series of template tools that utilize the existing lock installation for alignment. Templates have a series of drill bushings and guides for router or hole saw use. Installation is exact

without the need to measure and mark layout lines.

HIT-23 Lever and paddle handle installation.

HIT-24R Indicator installation with the use of a router.

HIT-24H Indicator installation with the use of a hole saw.

HIT-25 Armor strike installation with the use of a router.

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Sargent & Greenleaf's 6120



Your customers will love S & G's new 6120 Electronic Lock.

Its six digit code can be entered into an easy-to-read keypad in less than five seconds!

You'll love it because the 6120 is made for the retrofit market.

The standard mounting footprint and quick connect wiring require less than half the time needed to install a mechanical lock.

Contact your S & G distributor for pricing and special incentives.

**For FREE Information
Circle 437 on Rapid Reply**

Schlage



PRIMUS, your answer to high security, easily integrates into existing Schlage systems, the largest base of existing key systems in the industry.

PRIMUS allows you to set-up a high security system without replacing every cylinder.

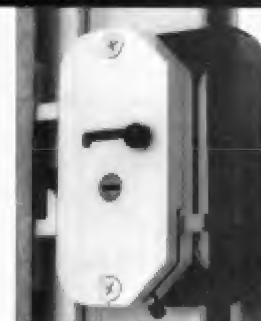
In addition, Primus requires a

minimal investment - no extra equipment is necessary to sell and service Primus.

Finally, only authorized locksmiths have access to the patented key blanks keeping customers coming back to you as their security expert.

**For FREE Information
Circle 436 on Rapid Reply**

Slideline



Open a whole new dimension to your business with Slideline products. The Slidematic™ Closer is a specially built hydraulic closer that when mounted to the tail of the existing sliding door automatically closes it. The Latchmatic™ Lock is a self-latching auxiliary door lock designed to be mounted on sliding doors in addition to the regular lock. It works by automatically latching the door after it

has closed. The Slidematic™ Closer and the Latchmatic™ Lock meet swimming pool safety legislation and are most effective and affordable ways of complying with these codes. Take advantage of the huge untapped market. You will gain profits from the Slidematic Closer™ and Latchmatic Lock as well as from related hardware needed to satisfy these codes.

**For FREE Information
Circle 435 on Rapid Reply**

All-Lock



ALL-LOCK has added to its family of Ford 10 bitted locks.

Four new parts, two to service the newest Ranger/Explorer and two more cover the rest of the Ford, Lincoln and Mercury.

Available in coded versions with keys or in uncoded cylinders, these locks

allow the locksmith to stock only four locks giving complete coverage rather than the 20 needed with OE or some other aftermarket brands.

**For FREE Information
Circle 434 on Rapid Reply**

International Locking Devices



International Locking Devices' heavy duty, double cylinder brass dead bolt fence gate locks can be locked or unlocked from either side.

A universal gate collar system permits the lock to be installed on all new and existing gates. With only a five minute installation, this device makes

an excellent add-on sale with high profit potential.

**For FREE Information
Circle 433 on Rapid Reply**



by
Brian Kleiner, Ph.D.

FAVORABLE FIRST IMPRESSIONS

Research has shown that people who look good are assumed to be more intelligent. Control what you can - your dress.

Cover
Feature

No one working with employees and customers in the locksmith industry can deny that the ability to create a favorable impression can be an immense source of power and influence. Yet, while we all recognize how centrally significant this goal is, relatively little is ever directly spoken about it.

In examining this process it should be highlighted that this is essentially a communicative art and as such involves two channels simultaneously - the nonverbal and the verbal. What then are the key principles underlying the nonverbal side of this art? The following are suggested:

- Look people in the eye and smile. We tend to distrust those who won't look at us. On the other hand, those who stare without smiling are often seen as aggressive. Hence, it is very important to combine the two.

- Nod as you listen to others speak. This signifies that what is being said is being understood. One usually suspects that if the other isn't nodding, she does not agree with or understand the message that is being conveyed. A slight tilt of the head signifies warmth and encourages the speaker to continue.

- Use open body language. People who appear defensive, tense and uncomfortable obviously do not create a favorable impression. There are a variety of ways to avoid this. These include unfolding your arms, uncrossing your legs and unbuttoning your coat. Also, lean forward when seated. This suggests you want to be closer. Leaning away suggests you want to keep your distance.

- Use a little touch at the right moment. Much research has shown that people willing to touch are considered warmer and friendlier than those who do not. However, timing is important. If done too early or when considered inappropriate, touching can be intrusive. When the ice is broken, though, a light touch on the other's forearm or back creates a very positive impression.

- Maintain a good general appearance and dress appropriately. Research has also shown that people who look good are assumed to be more intelligent. It may not be fair, but that is how our culture has been socialized. Hence, do what you can, particularly in the area over which you have most control - dress.

In verbal interaction there are also a number of principles that should be kept in mind. These are as follows:

- Empathize. We tend to be so absorbed in our own problems that we often have little energy to listen to and

appreciate the problems of others. Those who do listen create a very favorable impression.

- Make the other feel important. This is a need we nearly all seem hungry to fulfill. To achieve this, become genuinely interested in the person you are speaking with. This interest can be demonstrated by encouraging him to talk about himself and his interests. Addressing him by his first name also seems to help.

- Emphasize making paraphrased rather than evaluative responses. Evaluative people make us feel defensive. Those who summarize what we say without judgment make us feel comfortable and understood.

- Avoid the omniscient impression. Contrary to popular belief, perfection does not foster a favorable impact. We tend to trust those who can laugh at their mistakes and not take themselves too seriously; they create a comfortable rather than rigid atmosphere. Perfection is usually perceived as a facade anyway.

- Be problem centered rather than controlling. It can be irritating when a person or manager tries to control us when problems occur. The teamwork approach is much more effective: "We seem to have a problem. Let's examine what we did to create this problem and what we can do to remedy it."

The principles, underlying the art of creating a favorable impression are not overly complicated, but they are more difficult to apply than we might generally expect. This is because they go against the habits commonly formed by our culture, where so many are frequently looking out for themselves. However, if we recognize the application of these ideas as an enlightened way to enhancing our self-interest, they will gradually become more apart of our behavioral repertoire and we will have mastered an art that will contribute significantly to our financial success.



Cover
Feature

WOMEN IN LOCKSMITHING

With a background in accounting, Frances Bosart and her husband, Robert, turned a dying company into an income opportunity.

by Sara Probasco

Upon meeting Frances Bosart, one might never guess this soft-spoken, petite brunette is the majority owner of Bosart Lock & Key in Victoria, Texas. Along with their two employees, she and Robert keep three service trucks active in this city of 50,000 people. Among their commercial customers they number the four major factories in the area, including Dupont, a fact that doesn't hurt business a bit. Frances is quick to admit.

Frances Bosart's background is in accounting, a field in which she actively worked, prior to becoming owner/business manager of a full-line retail lock and key store, two years ago.



1. Bosart Lock & Key is a thriving business under the command of Frances Bosart and her husband, Robert.

When an existing locksmith business that was in a bad state of decline became available, Frances and her locksmith husband, Robert, took a long, hard look at the prospects and decided to give it a try. Once the decision was made and the purchase finalized, Frances jumped in with both feet, determined to make it work. Already, they have turned the business around.

"I'm not very mechanical," Frances admits, "but I say to myself, 'Can I do this?' and then I do." So far, she has learned to cut keys, repin locks, and effectively wait on customers, in addition to handling the "business" end of the business. Frances also deals with their inventory, pointing out that she has learned a great deal about the merchandise by checking the contents of the various boxes as she stocks the shelves. She claims organization is her strong suit, and she manages to keep things in line by doing little things the guys don't have time for.

So far, she hasn't tackled the areas of opening vehicles, impressing locks, or driving the service trucks. "I won't say I never will, but right now I'm content to let the guys cover those areas," she said. However, she and her husband have managed to move quite a few safes without assistance. "And no broken nails yet!" she said with a grin.

"I notice you spend a lot of time talking to other locksmiths at various meetings and conventions. Do you

have any suggestions about how they can improve their businesses?" I asked.

"Many locksmiths don't tend to the business end of their operations as they should. Locksmithing has become so much more than just knowledge of locks. We must strive for better organization of the entire operation," she replied. "That includes paying attention to how we spend our time. Time is money. I wish I had a nickel for every time I've said that around our shop. But it's certainly true for us and our customers. A lot of locksmiths don't utilize their slack time well, and they don't charge enough for their work time, travel time, and so forth. This will show up as a lack of profits."

Spare time at Bosart Lock & Key is spent studying product information, becoming more familiar with prices and inventory, and honing basic locksmithing skills. "Nobody stands around staring out the window at our shop. I'll jump on them in a minute," Frances says.

Asked what single event she counted most memorable, since entering the locksmith business, Frances replied without hesitation, "The day I sold a Diebold Safe. I happened to be in the right place at the right time to make the contact, but the actual sale was a direct result of my product knowledge and follow-up."

A customer had casually inquired about a safe. After he left the shop, Frances took the information she had gathered from him and located a safe she thought he would like. She promptly faxed the information to him, and the customer bought the safe.

"You have to know your products. Once you have determined your customer's needs, you need to double-check price, availability and delivery so you can let the customer know what to expect. I spend a lot of time studying catalog information, so I will be well informed about various merchandise available to our customers. Then, when they ask about something, I know what to tell them." Then she added, "I learned early not to try to sell a product I'm not knowledgeable about."

Continued on page 44



2. With an accounting background, Frances tackles the business end of running a shop.

Continued from page 42

Another point Frances emphasized is the need for safety in the shop and on the job site. "This includes being especially safety conscious where employees and customers are concerned," she added. As Frances pointed out, nobody needs the hassle and expense of a law suit, but just as important, none of us wants to see someone injured through our negligence or oversight. Furthermore, injuries on the job can mean down-time, which saps business income.



3. While constantly learning, Frances is as comfortable behind a key machine as she is behind the desk.

Frances further suggests displaying merchandise in a pretty, eye-catching manner, pleasing to women, as well as men. "After all, women control the purse strings in this country. If you want them to spend money with you, you must attract them into your store. Grungy counters and a dark, gloomy atmosphere won't cut it, these days."

"What advice would you give a woman considering locksmithing as a profession?" I asked.

New customers are often surprised to find a woman in the shop. It seems to especially please the female customers for whom a locksmith shop may be "unfamiliar territory." Frances believes eye appeal is important in a store. The decor at Bosart's is rustic enough to appeal to their male customers, but clean and organized. Flowers and plants add a nice touch, and the air has a good, fresh smell—an unusual addition, in a locksmith store.

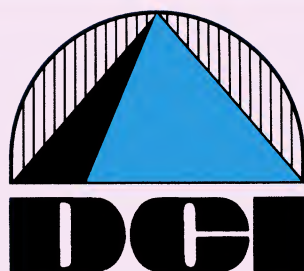
"I know how much I enjoy the smell of leather in a boot and saddle shop and the aroma of bread in a bakery, so I said to myself, 'Why not give our shop a smell nice, too?' We tried a variety of fragrances and settled on a Pina Colada spray. Our customers comment favorably on the light 'citrusy' fragrance."

"Go for it!" was Frances's enthusiastic reply. She is an advocate of the power of positive thinking. "You can do 'most anything you set your mind to,'" she asserts. "Get all the training you can, and then go as high as you can go."

Frances and Robert both believe in setting yearly personal goals. They write these down on New Year's Day, seal them in an envelope, and open them the following New Year's Eve, to see how well they did. So far, they're doing great.

When asked how she feels about a future in locksmithing, Frances replied, "I really look forward to each new day and the challenges it brings."

With an attitude like that, how can she miss?



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STAND ALONE PROFITS

Unlike larger companies, many small and medium-sized firms do not need all the features associated with costly full-blown card access systems.

by Steve Gebbia and Jake Jakubowski

Many businesses these days are concerned about non-authorized persons obtaining access to sensitive and potentially dangerous areas. While larger companies may opt for a full-blown card access system, many small and medium-sized firms cannot afford the high cost associated with those systems. For these customers, the best solution is often a stand-alone access control lock.

These will provide the security they need without breaking their budget, and are offered in both mechanical and electromechanical styles, dependent on manufacturer.

Homeowners also enjoy the convenience these locks provide. Teenagers, cleaning services and babysitters can all let themselves in without the homeowner worrying about lost keys falling into the wrong hands.

These locks are in high demand because of their versatility, ease of use, and lower cost. While there are several manufacturers now producing them, each has features which make it worth considering.

Alarm Lock (Electromechanical)

Alarm Lock's entry in this field is the DL2500 series lock, the Trilogy. (See photograph 1.) This is an electronic lock which is powered by two 9 volt alkaline batteries. While it is available with either knob or lever trim, the ADA approved levers are the most popular and these are what suppliers will stock. Key bypass in Schlage 'C' keyway or Best style interchangeable core is standard.

Unique to the Trilogy is the ability to release the lock remotely without the need for an electric strike or an external source of power. Additionally, every Trilogy lock is designed for

exterior usage. Because the electronics are housed on the inside of the door, they are protected from temperature extremes. To fully protect the lock against moisture, it is required that you seal the wiring connections with silicone caulk during installation.

As long as there is adequate room for the lock housing, the Trilogy will replace most cylindrical locksets. The installation is based on a standard 2-1/8" crossbore with a 1" edgebore.



1. Alarm Lock's Trilogy.

One additional hole is required to allow the wiring to pass through the door. Although 2-3/4" backset is standard, a Schlage 'D' series 2-3/8" deadlatch may be substituted.

Up to 17 separate codes can be used to operate the Trilogy. This includes: (1) Master Code, (1) Management Code, and (15) User Codes. The Master Code allows control of all programming functions while the Management Code is restricted to certain low-level

commands. The User Codes are grouped in three 'banks' of five codes each. The 15th User Code (bank 3, code 5) can be programmed as a Service Code allowing one-time only access. All functions of the lock can be programmed from the keypad without removing the lock from the door.

Other features include the ability to: lock out User Codes individually or by bank, set the lock into a passage mode, and adjust the length of time the unit remains unlocked each time a valid code is used. The Alarm Lock Trilogy also has a low battery alert and a full two year warranty.

The Trilogy is available through Alarm Lock distributors. For a distributor near you contact Alarm Lock at 800-645-9445.

OSI Security Devices (Electromechanical)

OSI Security Devices produces two lines of electronic access control locks. (See photograph 2.) The Omnilock 50 is an entry-level device which will replace many cylindrical locksets. The Omnilock 250 is a group of products which replace cylindrical locks, mortise locks, and keypads. The series number (50 or 250) indicates the total number of codes available for each device. All

Omnilocks are powered by a special lithium battery with an expected life span of five years. Both series also have low battery warnings. All OSI products are available with key bypass in Schlage 'C' keyway or Best type interchangeable core.

An important feature of both the Omnilock 50 and the Omnilock 250 is the ability to generate a printed audit trail using the optional printer. While both series of device contain an internal clock, the 50 series can use it

only to place a time and date stamp on the audit reports. The 250 series, on the other hand, can automatically switch between up to seven different time schedules per day. It also allows you to program in up to 32 holidays per year. Other electronic access control locks require you to manually lock or unlock the unit at the keypad. The 250 series also has a Facility Autocode function which greatly simplifies the task of programming several Omnilocks which are used in the same building or complex.

One thing to remember is that while both series of device have some degree of moisture protection, neither is meant to be used in an exterior application.

The 50 series allows (1) Master Code, (3) Submaster Codes, and up to (50) User Codes. The User Codes are arranged in four user-definable groups. Additionally, any User Code(s) may be designated as a Supervisor Code.

The Master Code has full control of all functions of the lock. The Submaster Codes have limited control over all User and Supervisor Codes.



2. OSI's Omnilock

The Supervisor Codes have control over the User Codes in their own User Group.

The Omnilock 250 allows (1) Master Code, (5) Submaster Codes, and up to (250) User Codes. Any User Code may be designated as an Extended User which will allow it limited programming ability. The lock may be set to four different levels of access. These are:

- 1) Unlocked...no code required.
- 2) Code Required.
- 3) Lockout...User Codes locked out, extended Users have access.
- 4) Shutdown...Only Master or Submaster Codes can enter.

The Omnilock 250 has one more useful feature: an attempt counter. After a preset number of attempts to use a User Code, it is automatically locked out. The unsuccessful attempts are also recorded in memory for the printed audit report.

All Omnilocks are, of course, easily programmed at the keypad.

For more information, contact OSI at 408-720-0909.

Simplex/Unican (Mechanical)

The Simplex/Unican group manufactures two complete lines of stand-alone access control locks. All of the locks currently in production are mechanically operated. Because there are no electrical components in these locks, they can be used in exterior applications without concern for possible water damage. (See photograph 3.)

These mechanical pushbutton locks accept a



3. The Simplex/Unican line.

private code of up to five digits that the user selects and sets at the time of installation. Because thousands of combinations are possible it is virtually impossible to guess a code. The code can be changed as often as needed, in minutes, without removing the lock from the door.

While not offering the flexibility of the electronic access control, these units do provide excellent control where only a single code is needed for residential, commercial and institutional applications.

The Simplex line of access control locks are designed primarily for the residential market. These are attractively styled to complement many different decorating styles. The primary line is meant to replace a cylindrical knobset. Also available is a less expensive series of surface mounted locks similar to rim style locks, a cabinet lock, and a mechanical keypad.

The Unican line of access control locks was the first to be widely accepted by the commercial and industrial markets. This is due to their ease of installation, Grade 1 chassis, and high degree of reliability. Unican makes three series of access control locks, each of which is designed to fit a particular commercial application.

The 1000 series, by far the most popular, is meant to replace a standard cylindrical lockset. The basic unit operates as a storeroom lock. Options include two different passage functions, a choice of knob or lever trim, and a variety of key bypass options. These locks are built for 2-3/4" backset. The wide escutcheon should cover a 2-3/8" backset crossbore when relocated to 2 3/4"

backset. As with any retrofit application, double check all measurements before beginning your installation.

The 2000 series will operate many rim style panic exit devices. However, these will not work on TP function devices or other hardware that requires more than 60 degrees of tailpiece rotation.

The 3000 series is designed to operate Adams-Rite style latches on narrow-stile aluminum doors using the Adams Rite style deadlatch. Unique among the Unican line, the 3000 series device has the ability to mechanically lock out the User Codes. A standard mortise cylinder can be used to operate the key bypass feature, included on all 3000 series locks. Backset and handing must be specified when ordering these locks.

All Simplex and Unican products can be easily recombined in a matter of moments by an authorized individual. As with most access control locks, these products require additional clearance above the crossbore (1000 series) or cylinder centerline (2000/3000 series). Should service become necessary, repair parts are readily available for all Simplex/Unican products. Contact a Simplex/Unican distributor for more information.

Door Systems, Inc. (Mechanical)

Door Systems, Inc. announced the release of their new, tough, rugged and attractive lever-handled, mechanical access entry system - the Keylex 2000 lever. (See photograph 4.)

The Keylex has a solid cast brass housing that contains it's all metal components which should give the unit excellent weather-resistance and dependable, trouble-free, mechanical operation for years.

The Keylex is non-handed (the levers are field reversible), and utilizes either a 2-3/8" or 2-3/4" UL approved latch. The exterior lever has a slip clutch to preclude excessive downward pressure from breaking the lever or spindle. To reactivate the lever when the slip clutch has been disengaged simply turn the lever counterclockwise until it stops.

The Keylex has a passage feature that allows the unit to remain in the unlocked position to permit entry



4. The Keylex 2000 by Door Systems, Inc.

without punching in the code. The passage feature can be permanently deactivated if desired. A Medeco lock gives the Keylex key-override capabilities.

The combination is changed by removing the back cover of the lock housing and re-arranging the combination tumblers. A procedure similar to Door System's Digital brand of mechanical access locks.

Installation is simple and straight forward, does not require any special tools or knowledge. The Keylex can be installed on wood, metal and composition doors, anywhere you might usually install any entry set.

By combining lever handles, a passage function, push button entry and a key override function, the Keylex 2000 has come up with a cost-competitive mechanical access system that

combines ADA compliance with good looks and durability.

For more information on the Keylex 2000 contact: Door Systems, Inc., P.O. Box 576, Hatboro, PA, or call 215-672-8087 for the Keylex distributor nearest you.

Preso-Matic (Mechanical)

Preso-Matic has a proven, thirty year, track record in the mechanical access control field. In fact, they were manufacturing mechanical access control units before the term "access control" came into usage. Although Preso-Matic makes a variety of models, this review is dedicated to two of their most popular units. The 8100 series is the deadbolt model and the 8200 series is the deadlatching model. (See photograph 5.)

The Preso-Matic pushbutton combination (capable of up to 10,000,000 theoretical changes.) door lock is a mechanical keyless lock that does not require the use of keys or cards. You simply punch in the proper combination, and the locking slides fall into place. When you push the last

Continued on page 49



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Continued from page 47



5. Preso-Matic's 8100 deadbolt.

button of the proper combination, the bolt retracts.

Either model allows for instant one button exit from the inside whether the door is in the locked mode or not. Even when the night latch feature is engaged and has locked out the use of the combination. Just push the button.

No knobs to twist or handles to turn. Which makes the Preso-Matic ideal for the disabled or handicapped.

The Preso-Matic is tough. It is built to stand up under high density traffic that is found in many commercial and industrial applications. It is approved

by the FAA for airport security. It is used by all major airlines and branches of the armed forces. The FBI recommends its use by banks. And, it is used by General Electric, IBM and General Dynamics.

Changing the combination on the Preso-Matic can be done with the unit mounted on the door. However, you need to replace the entire combination slide. Still, it is a simple and quick procedure.

Installation of the Preso-Matic is not as easy as installing a cylindrical lockset, but is nothing to be intimidated by. And, once installed, it is an attractive, functional, hard-working and secure access control unit.

For more information about Preso-Matic products, or a distributor near you, write: Preso-Matic, 237 Coastline Road, Sanford, FL 32771, or call 407-324-9933.

Winfield (Electromechanical)

Winfield, most noted for their locking systems used by the hospitality market, just recently introduced the Microkey system.

Microkey incorporates either a mortise lock or tubular latch sys-

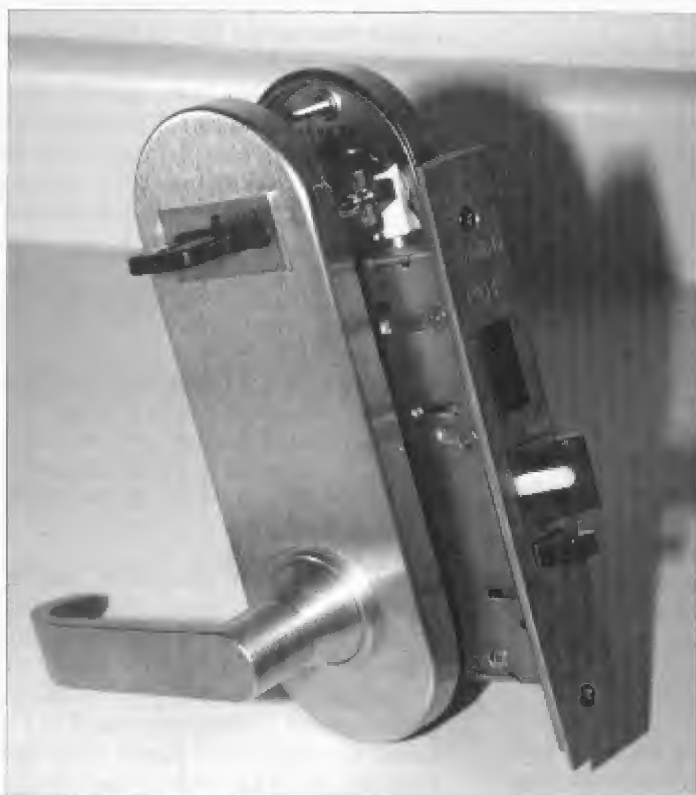
tem, using a re-programmable, digitally encoded key, and operates off of four AA size batteries. The key is inserted into the front of the lock to activate.

With the large escutcheon, the Microkey easily retrofits any existing mortise or standard 161 door prep. Because all electronics are contained on the inside part of the lock, it is not affected by weather or subject to easy bypassing.

The unique feature of the Microkey is its ability to serve as a restricted system. All keys are programmed through a standard IBM/PC computer or a Microkey encoder. With either method, the unit is given its own ID programming number that cannot be duplicated by any other. This allows locksmiths to have total control of any system they install.

The Microkey allows for masterkeying capabilities, provides audit trails with user ID's, time zones, holiday windows, etc. The last 1200 events are recorded for audit trail use.

For more information, contact Winfield at 800-562-5733, Ext. 401.



6. Winfield's Microkey

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by
Jake Jakubowski

SECURITRON'S TSB-3

You don't have to be an electrician to make money installing electronic "gadgets."

At the ALOA sponsored trade show in Las Vegas this past July, I was impressed by the variety of merchandise, and manufacturers, that were represented... literally from around the world. The term, "Off shore," begins to lose its Oriental connotation in the face of key machines from Mexico, automotive security from Israel, and an array of products from Europe. Virtually every facet of our trade was represented.

However, one particular group of products vied for, and won, my attention... electronics! You name it! It was there. Electromechanical door openers, electro-magnetic locks, card readers, digital access, proximity readers, and panic/exit devices. Also on display were a fair variety of electronic safe locks, including digital, and combination.

No doubt about it, the future of locksmithing is going to be tremendously influenced by more and more sophisticated electronic locks, strikes, opening/closing devices, and safe

"No doubt about it, the future of locksmithing is going to be tremendously influenced by more and more sophisticated electronic locks, strikes, opening/closing devices, and safe locking mechanisms."



1. The set of double doors requiring electronic control.

locking mechanisms. The really exciting part of this "revolution" is that the majority of locksmiths now in business, already possess the tools and have the ability necessary, to sell, install, and service many of these new and exciting products!

As I was entering Securitron's exhibit, two locksmiths were leaving. One was commenting to the other that, "those gadgets are really slick, Joe!" "Yeah," said Joe, "but I ain't no blinkin' electrician, Y'know! Besides, that stuff's outta sight, man! By the time ya figure everything in, who's goin' ta pay ya the kinda money ya'd need ta make a profit?"

Joe, if you're reading this, listen to me! You don't need to be "no blinkin' electrician, Y'know," and a lot of people will "pay ya the kinda money ya'd need to make a profit." Basically, all you need to be able to install "those gadgets," is the ability to read, and follow, directions. Joe, if you've ever replaced the plug on a lamp cord, or repaired a broken extension cord, you can install the majority of today's electronic door hardware!

The manufacturers of these devices generally include very thorough step-by-step instructions for properly

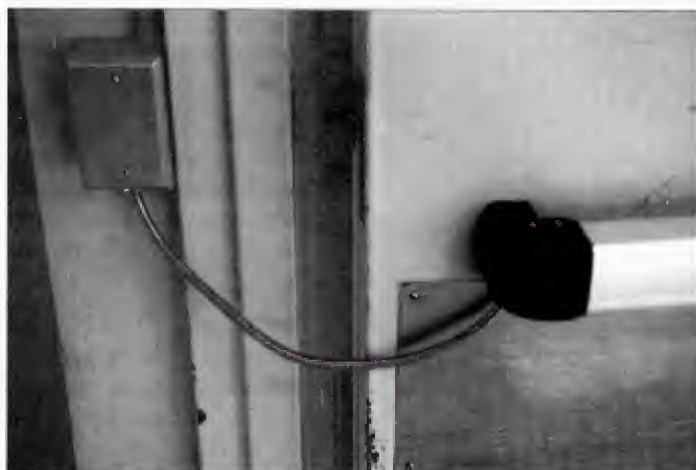
installing their product. They include templates for the drill points for the mounting holes, the screws, fasteners, sex bolts, compression nuts, etc., necessary to "hang" their product.

In fact, Joe, the step-by-step directions that I have encountered are written for folks like you and me. They're straightforward and easy to understand. The schematics (wiring diagrams) are just as simple to follow. Nothing to be intimidated by. "Red wire to terminal 5, Blue wire to terminal 6," that sort of thing. If it weren't for the fact that fools can be so darned ingenious, I'd say the instructions, and schematics, were foolproof.

However, Joe, the manufacturers realize that people like us really aren't "blinkin' electricians," but locksmiths. So, many of them have (just in case we have a problem) an 800 number to their technical support department in their instruction manual. The person that answers that trouble shooters line can tell you whether you put the blue wire on the wrong terminal, or hooked up the "gizmo" to the wrong "thingamajig."

So, Joe, I'll tell you what. Come on with me, a nonelectrician like yourself, and I'll show you just how easy it is to install an electromagnetic lock with digital entry, and a really slick panic/exit bar.

A hospital, that I do a lot of regular locksmithing for, asked me to come up with some kind of electric lock with a panic bar on the inside for their ambulance entrance. The problem was that not only could the EMT's come through the doors with the patients, but anyone loitering by the entrance could, too. The behavior of



2. The Wire Mold junction box, DR-25P cable and TSB-3 cable.

some of the hangers-on was less than angelic. In fact, the hospital staff had taken to calling that particular area the "Knife and Gun Club."

The first thing I did was to stop by the hospital to scope the job, to see what was involved. The door they wanted secured was actually a pair of outswing, steel doors without a mullion in between. (See photograph 1.)

Tapping on the frame told me that the frame was concrete filled. (Joy! Oh, Joy!) I mentally added several extra drill bits to the price of the job. The walls were 12" cinder block, with a smooth troweled, and painted, plaster finish. I also measured the width of the door stop, and it's thickness down from the bottom of the header.

Then I called Securitron in Nevada. They recommended using Securitron's Model 62, 24-volt, Magnalock (one for each door). The DK-25P keypad and CPU board for access (See *The National Locksmith*, June 1994). And last, but by no means least, the new TSB-3 Touch-Sense bar, which senses human contact - even through clothing - to deactivate the Magnalocks, thereby allowing either one, or both doors to be pushed open (touching either TSB-3 deactivates both locks).

The Touch Sense Bar, which has no moving parts, meets NFPA's 101 requirements for no prior knowledge egress. Simply touch the bar and the door is unlocked. The sensitivity of the bar is controlled by a potentiometer which allows the sensitivity of the bar to be adjusted. The entire system is

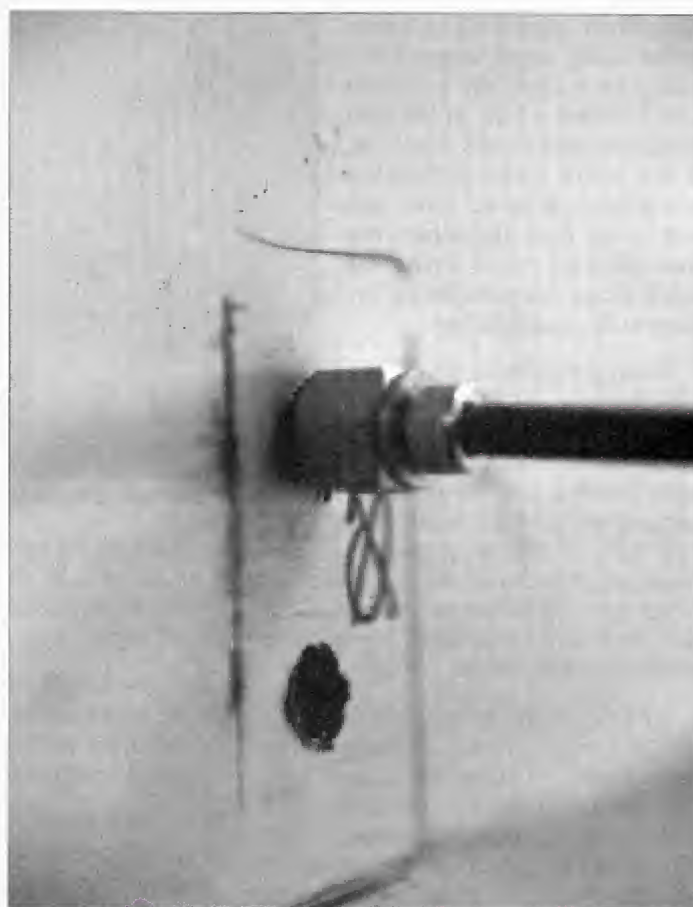
fail-safe, which means that in the event of a power fail-ure the door is unlocked, period!

After figuring out my materials list, I submitted my bid to the hospital, which they accepted.

O.K., Joe, we've got the locking system, and we stopped by my local hardware store to pick up some odds, and ends. We're ready to go. Joe, I promise, you're going to love this.

Photograph two shows the Wire Mold junction box where the DR25P cable and the armored TSB-3 cable meet and are routed to the CPU Board.

To bring the DK-25P cable to the inside of the door, I drilled a 1/2" hole almost completely through the wall from the out-



3. Installing the compression nuts for mounting the TSB-3.



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side. Then, after drilling a hole in the inside frame where I was going to mount my junction box, I drilled a hole in the wall at right angles to the first hole. It was a little tricky getting the two holes to intersect since one was lower than the other, but that allowed me to bring my cable from the outside of the door to the junction box.

Photograph three shows me installing the compression nuts used to mount the TSB-3 to a metal door. The compression nuts needed are supplied by Securitron and are a healthy 1/4"X20. Four of these hold the mounting blocks to the door. All the electronic components are inside the bar and are shielded by tough, molded, Lexan covers.

Photograph four shows both magnets mounted to the header of the door frame. Notice the spacer bar. The stop rail on this door was not wide enough to mount the Magnalocks to so, I used a spacer to give me the added width. Also, note in this photograph, that there are no exposed wires. The wires from the



4. The mounted Magnalocks.

Magnalocks run inside the frame and come out in the triangular shaped Wire Mold junction. More tricky drilling.

The DK-25P CPU board and 24 volt DC transformer were mounted above the drop ceiling away from curious minds and probing hands.

Photograph one, again, shows the completed installation from the inside of the door. Everything I needed to do the job with the exception of the Wire Mold conduit and junction boxes, the

transformer and the spacer was included in Securitron's package.

Now, the hospital's ER personnel feel more secure, the EMT's bringing in patients still have unimpeded access to the ER, and the hangers-on and trouble makers are kept out.

So, there you have it, Joe. It me took about seven hours to do the job. Not too bad for a fellow that's "no blinkin' electrician" either. But that's the beauty of it, Joe. We don't have to be. All we have to be is willing to try something new and take some extra shekels home.

Before installing any electronic device, however, check with your local building authorities since regulations governing electronic access can vary from jurisdiction to jurisdiction.

For more information about Securitron Products, contact your distributor, or call Securitron at 800-MAG-LOCK.



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UNKNOWN WORKHORSE, THE CORDLESS DRILL

Advances in battery operated drills has made the locksmith's job easier, faster and more profitable.

A typically unrecognized workhorse in the locksmith's tool box is the cordless drill. Having adopted the endearing name "Rotary Pick," this tool is recognized for its convenient use in light, short-term drilling common in opening locks, automotive lock removal, pre-drilling pilot holes and driving in screws. Overlooked, however, is the proliferating use of the tool for doing the heavier, long-term work of lock and hardware installation.

As little as five years ago, cordless drills were considered a convenience item that eliminated the need for running extension cords. Today, however, these once infant items have rapidly grown into a necessity for making fast efficient work of almost any job the locksmith faces.

The reason for this transition is twofold: First, technology has lent a helping hand in creating and developing a more powerful, useful and versatile tool at reasonable prices.

Only a few years ago, a top-of-the-line, fully equipped cordless drill may have included a 9.6 volt battery, two speed selections or variable speed trigger, selectable torque setting, reverse switch, a keyed 3/8" chuck and cost about \$175. The package normally included one battery and a battery charger.

Today, for a few more dollars (some between \$200 and \$250), a locksmith can purchase an industrial rated drill with up to two 12 or 14.4 volt batteries, selectable two speeds, variable speed trigger, reverse switch, selectable torque settings that include a screw gun setting, a quick release keyless 3/8" chuck, one or two screw driver tips, and a quick-charge charger.

The second reason for the growth in cordless drill use is a result of better drills. As they become stronger

and longer lasting while remaining reasonably priced, their usefulness to the locksmith increases. It is now feasible to use a cordless drill for more than just drilling locks and pilot holes. The higher torques, longer battery life and quick charge batteries allow them to be used on a full day's worth of hardware installation.

DeWalt, a division of Black & Decker, even carries a cordless 1/2" chuck drill capable of handling hole saws up to and over 2-1/8". A benefit in any locksmith's favor. (See photograph 1.)

Features

As stated earlier features on most industrial drills today include variable torque settings, two speed selections, variable speed trigger, reverse switch, electric brake, and keyless chuck.

For obvious reasons, the keyless chuck is of great advantage. No more lost chuck keys. The electric brake makes sure the drill stops once the trigger is released, helping prevent errors and mistakes from over-turning screws and drilling too deep.

The label VSR is often attached to these drills and simply stands for Variable Speed Reversing. The variable speed refers to how the drill reacts when the trigger is pulled. Older or less expensive drills run at full speed once the trigger is pulled. Models that are a little newer or more expensive may allow the user two or three speeds depending on how hard

the trigger is pulled. The newer versions, however, offer variable speeds that are dependent on how hard the trigger is pulled. Being reversible allows turning in either direction.

As a drill is called on for many purposes, there is often a battle between obtaining the correct drill speed while maintaining the highest degree torque. For this reason, many of the drills are fitted with a switch for selecting the speed range desired. For jobs demanding higher speed drilling



1. This DeWalt DW991K, 14.4 volt, 3/8" chuck drill is just one of the many drills available to locksmiths. Technological advances now make cordless drills feasible for handling the heavier work normally reserved for the standard 115 volt plug-in drills.

and lower torque requirements, the drill is set for the higher speed range. When heavy drilling or driving in screws demands higher torque, the switch is set for the lower speed setting.

Helping with torque settings, most all industrial cordless drills include a slip or versa-clutch torque setting.

This allows the user to drive in screws without stripping or burying the screw.

Batteries

Probably the single most important factor in keeping a drill running at peak performance is the care and maintenance of its battery. Unlike the motor of a standard drill, with an unlimited power supply, the cordless drill must balance a motor with maximum torque, speed, and time of operation with the size and capacity of the battery. The battery is the heart and soul of the drill. Even the largest and most intricately designed drill motor is useless without the appropriately matching battery.

Batteries that have been abused, not fully charged, or are misused usually leave the locksmith swearing-at instead of swearing-by his drill. With proper battery care and maintenance, however, the cordless drill is a very dependable tool, often outperforming their corded predecessors for convenience and reliability.

So, where do we make our mistakes?

Optimum battery strength and life occurs on a battery that is used and charged regularly. Batteries that are charged and left to sit in a service vehicle eventually lose their charge. Drills suffering from long standing batteries usually start out strong but very quickly die, usually in the middle of the job.

Optimum battery strength and life is also achieved by keeping the battery and drill within proper operating temperature ranges. Drills and batteries left in vans during the heat of the summer and the dead of winter are prone to severe power shortage and loss. To ensure a good strong battery, charge regularly, especially after use or prolonged non-use.

Older battery technology advised that the battery be completely discharged before recharging. This was due to the "memory" that partially discharged batteries had. If not fully discharged, the battery could only be charged up to limit of its memory. This, of course, meant most batteries could not be fully charged. And in order to attain full charge, the battery

had to be fully discharged and recharged several times.

Fortunately, today's technological advances have pretty much negated the battery's memory problem. Most name brand cordless tools now use batteries that can be charged to full capacity regardless of how depleted the battery is. Don't apply this across the board, however, check with the drill manufacturer and that manufacturer's instructions on recharging the battery for your drill.

As some final tips on battery handling, always store a battery in its proper storage place. Never let them lay loose on a shelf or box. Should the contacts of these batteries come into contact with nails, metal shelves or other conductive material, they could ruin the battery and/or cause severe damage or injury.

When leaving your service vehicle for the day, bring the batteries, if not all the cordless tools, into the shop where they are protected from extreme temperatures. Keep the battery and charger clean and free from dust and foreign material.

Following a few of these simple rules will increase the life and usefulness of your cordless drill.

Recently *The National Locksmith* requested cordless drills from the major brand manufacturers of cordless drills and equipment commonly purchased by locksmiths. Reviews of DeWalt, Black & Decker, Milwaukee, Bosch, Ryobi and Skill drills follow. We were unable to procure a Makita for this article.

All of the models reviewed included 3/8" keyless chucks and reverse switches near the trigger. Both features offer fast and efficient tool use.

The suggested list price is for the package reviewed and may be lower if buying a smaller package or components separately. It should also be noted that in most cases the actual sale price is significantly lower than the suggested list price of the unit. The DeWalt unit, for example, has a suggested list of \$230, but is offered by several home centers for around \$189, a difference of almost 20 percent.



Milwaukee Electric Tool Corporation

Model #0407-1 kit

Battery: 12 volt, Nickel-Cadmium, two included

Chuck: 3/8" Keyless

Features: VSR, two speed range selections (0 - 350 RPM and 0 - 1000 RPM), electric brake, six position torque setting.

Other: Includes a battery charger, screw driver bits and large metal tool box with top tray.

Comments: Milwaukee is a name with a tradition for quality made tools. This light weight, slender unit performed very well under both high speed and torque demanding conditions.

Price: \$354 for package.



Skil, S-B Power Tool Company

Model #HD2736:02 Heavy Duty, Top Gun II

Battery: 12 volt, Nickel-Cadmium, one included.

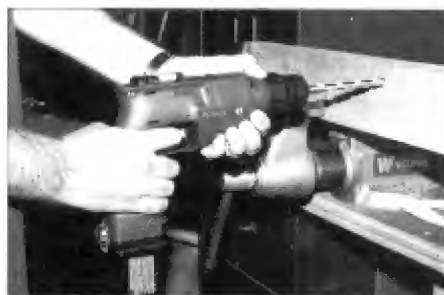
Chuck: 3/8" Keyless

Features: VSR, two speed range selections (0 - 500 RPM and 0 - 1650 RPM), five position torque setting, electrical brake.

Other: Includes a battery charger and heavy plastic carrying case.

Comments: Skil is also a highly recognized name in tool manufacturing. This nice, light weight drill performed satisfactorily under both high speed and torque demanding conditions.

Price: \$237.



Bosch, S-B Power Tool Company

Model #3054VSRK

Battery: 12 volt, Nickel-Cadmium, two included

Chuck: 3/8" Keyless

Features: VSR, two speed range selections (0 - 500 RPM and 0 - 1100 RPM), 20 torque settings in each speed range using the "Quiet Torque™" electronic clutch, and electric brake.

Other: Includes a battery charger, screwdriver bit and heavy plastic carrying case.

Comments: Bosch is known worldwide for their quality power tools. This model drill did an excellent job when put under both high speed and torque demanding loads.

Price: \$330.

Ryobi

Model #TFD222VRK, Torque Force 220

Battery: 12 volt, Nickel-Cadmium, two included

Chuck: 3/8" Keyless



Features: VSR, two speed range selections (0 - 400 RPM and 0 - 1300 RPM), six position torque setting.

Other: Includes a battery charger, screw driver bits, electric brake, and heavy duty plastic carrying case.

Comments: While not as well known, this Ryobi unit did an excellent job both drilling and driving screws. This particular unit offers 220 inch-lbs. torque per the manufacturer.

Price: \$365.

Black & Decker

Model #2874 Super Cyclone Series

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Battery: 14.4 volt, Nickel-Cadmium, one included

Chuck: 3/8" Keyless

Features: VSR, two speed range selections (0 - 450 RPM and 0 - 1400 RPM), drill and screw driver select functions, electric brake, 23 position (11 full positions plus half positions) torque setting for both drill and screw driver function.

Other: Includes a battery charger, screw driver bits and large metal carrying case.

Comments: Borrowing DeWalt technology, the Black & Decker industrial cordless drill performed superbly under both high speed and torque demands. The screw driver feature of the drill disengages the

chuck until pressure is applied, allowing the user to pick up and place screws with the screw driver tip without releasing the trigger. Despite its heavier battery, the unit is well balanced, allowing for long durations of use without tiring.

Price: \$250.



DeWalt, Division of Black & Decker

Model #DW991

Battery: 14.4 volt, Nickel-Cadmium, one included

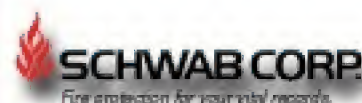
Chuck: 3/8" Keyless

Features: VSR, two speed range selections (0 - 450 RPM and 0 - 1400 RPM), electric brake, 17 position (6 full positions plus half positions) torque setting.

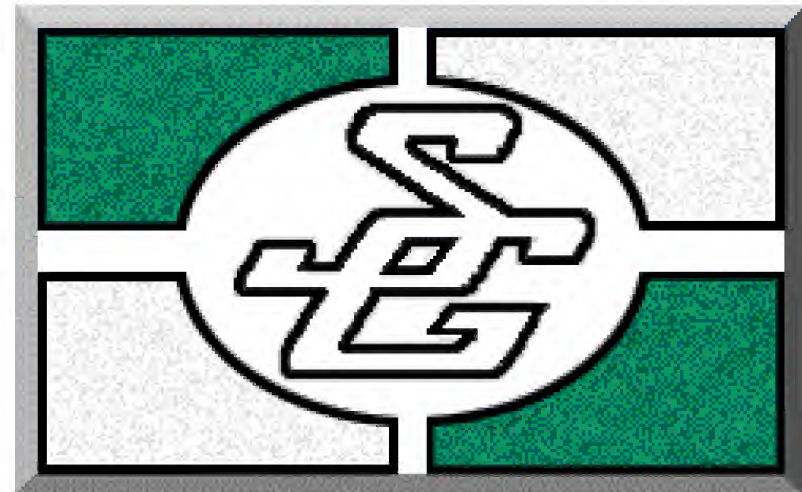
Other: Includes a battery charger, screw driver bits and large metal carrying case.

Comments: Companion to the Black & Decker drill, this unit provided the same exceptional torque and speed under extreme use.

Price: \$230.



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BUSINESS BRIEFS

News from the Locksmithing Industry

INDUSTRY INTERVIEW...

Perseverance, tenacity, resourcefulness and not accepting "It can't be done" for an answer; the traits necessary for success. Add to that a touch of enthusiasm and a whole lot of neighborliness and you've got Rusty Alsbrook, National Sales Manager for All-Lock, manufacturer of OEM and after market automotive locksets.

Recently, *The National Locksmith* was able to catch up with Rusty to ask him a few questions about himself and his involvement in the lock industry.

How and when did you get involved in the lock industry, Rusty?

I guess I've always been kind of involved in manufacturing and putting things together.

My father was a cabinet maker, carpenter and general contractor. From the time I could walk I was carrying a hammer. And as I grew up I naturally started working for my father.

Later I left home to go on my own and returned after I ran out of money. That was about 1957 in Auburn (Alabama).

I started working for my father again, but went out every day trying to find other work. This was during the Eisenhower recession time and jobs were hard to come by. It was pretty difficult.

Then one day, it was kind of coincidental, I walked into the unemployment office and the clerk said a job had just come in by a company looking for a warehouse clerk. It was at Independent Lock Company.

I wasn't going to let this job get away, so, I went there immediately and spoke with the supervisor. Unfortunately, he wasn't as enthused as I was and it didn't seem he was going to hire me on the spot.

Well, I wasn't going to be turned down, so I told him that I'd work for him for one week without pay if he'd give me a try. If he didn't like my work after that week I'd leave.

He accepted, but told me I would need a medical examination before starting. Not expecting much he told me I could start the following week. Of course, I didn't want to wait. I still had an hour or so before the hospital closed, so I ran over there, got my physical, and reported



Rusty Alsbrook
National Sales Manager
for All-Lock

to work the next day! And that's when I started working for ILCO. That was in 1958.

And except for serving in the military during the Berlin and Cuban Missile crisis, that's where I got my start in the lock industry. Eventually I moved up from warehouse clerk to working on the assembly line and getting involved in engineering and manufacturing.

By 1969 I was Supervisor of ILCO's Automotive line and

later was Supervisor of the Industrial Assembly Cam Lock and Plug line. A lot of these plugs and locks were sold to General Automotive Specialty Company. They specialized in electrical switches and used our plugs and lock assemblies for many of their products.

After its sale to Aaron Fish, ILCO sold its automotive line to General Automotive Specialty Company who then formed All-Lock. Going along with All-Lock as their Product Engineer, roughly 1974, I was there to package the first All-Lock lock.

I worked in this position till about 1986 when I served as Quality Assurance Manager, working as the liaison between the domestic automotive manufacturers and All-Lock. In 1988 I was moved to my current position as National Sales Manager.

Having been involved in the lock industry so long, Rusty, what changes have you seen take place?

To me, there seems to be more of an emphasis on home security and auto security. As I was growing up, the only time we locked our doors was on Sunday when we went to church. Today, people are much more concerned about using locks to prevent theft.

Also, it used to be that locksmithing was passed from father to son. Everything could be learned on the job.

...INDUSTRY INTERVIEW (continued)

Now, security is much more technical. Locksmiths need to attend schools and seminars in order to stay in touch. It's no longer the father-son operation of the past.

What do you feel the locksmith is going to need to succeed and remain in business in the future?

Locksmithing is no longer a trade where you can go into business after a year or two of training. There is going to be a need for a higher and more intense degree of education.

But not just technically. Locksmiths are going to have to become trained in other areas regarding business, especially marketing.

While I am sure there will continue to be small locksmith shops operating successfully, I believe locksmiths in the future will need to specialize and join together to be competitive and successful. Instead of one locksmith trying to cover a broad range of locksmith related work, more and more shops will be run by two or three locksmiths, where each will specialize in a particular area of locksmithing.



Advanced Hardware Technologies, Charlotte, NC, is pleased to announce the appointment of:

Access Solutions, Charlotte to North and South Carolina and Georgia. 704-846-3670.

Bauman Associates Seattle to Washington, Oregon and Idaho. 206-821-4600.

Robert Perry Assoc., Schaumburg to Illinois, South and Central Wisconsin and North Indiana. 708-894-1700.

Mid Atlantic Assoc., Delaware, Maryland, Washington D.C. and Virginia. 410-893-1153.

Stegweit & Maguire, Inc., Toronto to Ontario (including Ottawa), Canada. 905-829-5111.

Bob North Agencies, Alberta to Alberta and Saskatchewan, Canada. 403-472-0551.

Advanced Hardware Technologies manufactures the Protector lever in kit form for converting ANSI Grade 1 and Grade 2 cylindrical knobsets or as a complete lock package in ANSI Grade 1 and Grade 2 functions.

The Master Locksmiths Association of New Jersey elected **Steven Frei**, CML, President; **Ray Favocci**, CPL, Vice President; **Ron McGill**, Secretary; **Stewart Levine**, CML, Treasurer; **William Timmann**, CML, Sergeant at Arms; **James Green**, CRL, Chaplain; **Nick Ambrose**, CPL, Vice President of Convention.

The Board of Directors of **Robert Skeels & Company** elected **Ken Jordan** President of the company, with responsibility for all business operations.

Ken succeeds his father, Les, who will be retiring at the end of 1994.

Mark A. Gloeckler has been named sales support manager and Randolph L. Gockley has been named marketing data coordinator for the Dorma Group.

The Technologies Division of **Briggs & Stratton Corporation**, Milwaukee, WI, announces the promotion of **Jerald Peebles** to Vice President of Operations.

Previously responsible for the Briggs & Stratton Plant in Juarez, Mexico, Peebles now assumes management responsibility for all divisional plant operations, including Milwaukee.

They also appointed **Paul Glatzel**, Divisional Quality Manager. Mr. Glatzel will have the responsibility for the divisional quality organization which includes Quality Engineering, Test Lab, Product Layout Lab and Gage Design.

They also appointed **John Ottman** to the position of **Marketing Manager**. Responsibilities will include marketing and strategic planning, sales and new product

Schwab Corp. was recently presented with a **1993 Diebold Supplier Award**. The award was made May 10, 1994, at Schwab's Lafayette, Indiana headquarters. **Jim**



Pellegrene, Product Manager from Diebold presented the award to Marketing Coordinator **Penny Golden** and President **Pete Neisel** at a ceremony for Schwab employees. **Victor Bates**, **Randy Benore** and **Dan Schmidt** were also on hand from Diebold.

Douglas Schreffler has been named Product Manager, Retail for padlocks, according to **James D. Donegan**, Vice President of Sales and Marketing for Master Lock Company.

As product manager, Schreffler will be responsible for coordinating the advertising, pricing, distribution and promotional activities of the retail padlock division.

New address for **Sentrylock**, Sentrylock Inc., 1930 Case Parkway, Twinsburg, Ohio 44087. 216-425-1354, fax 216-425-1834.

Anthony A. Salamone, President of Telkee, announced the appointment of **Penny Reuss** to the position of National Sales Manager.



Penny Reuss

Prior to joining Telkee, Ms. Reuss headed up on her own consulting firm - I/O International, Inc. - where she and her staff developed and implemented sales and marketing strategies for companies ranging from small businesses to Fortune 100 firms.



LIGHTER SIDE

The Year Traditions Fell From Grace

For as long as anyone could remember, it had been a Bruckner family tradition to "come home" for Thanksgiving. That meant returning to the old homeplace in the country, the house which Aunt Mary now occupied alone, which had been her mother's and grandmother's before her. Since births and deaths in the family seemed to occur at about the same rate, the numbers in attendance varied little, from year to year. There was always a large gathering around the Thanksgiving dinner table. From all indications, this year would be no exception.



by
Sara Probasco

Aunt Mary was expecting forty-seven family members, old Mr. Robertson, from down the road, and the Rev. and Mrs. Carmichael. In addition, someone almost always brought a guest or two that might otherwise have spent the day alone.

Every woman in the family had her own culinary specialty to contribute to the feast. Aunt Molly brought her butter-dipped Parker House rolls, light as a summer breeze. Cousin Maude's ambrosia was truly like the nectar of the gods, thanks to her secret ingredient. Sister Matilda's Sweet Potato Delight was the envy of all, made from an old family recipe (on her husband's side) which Matilda would not divulge. But despite the other mouth-watering delights, the turkey truly made it Thanksgiving.

That was Aunt Mary's specialty, and what a wonder it was! She always rubbed the inside of the huge bird with a mixture of oil and fragrant seasonings and stuffed it to overflowing with her soft, herb-flavored cornbread dressing before lacing the bird up tight. Then she

lovingly squeezed it into her large, oval, blue-and-white enameled pan (which had seen more Thanksgivings than 'most anyone there) and roasted the bird to golden-brown perfection.

Uncle Harry always carved the turkey. Standing at the head of the table, he made a production of running the long carving knife down the sharpening rod, first on one side, then the other, making it sing with a brisk, military flourish. Just as Harry stood poised, holding the fork at just the proper angle, with his elbow high, preparing to impale the waiting sacrifice, Reverend Carmichael would invariably raise his arms into the air and say, in a loud voice, "Let us all bow our heads while I say grace."

Every year, Uncle Harry would stand there through the blessing, eyes closed, looking very like the statue of General Haversham down at Crosley Park (he's the one about to run a fallen Indian through with a rapier), except that Uncle Harry didn't have his foot on the turkey's chest, of course.

If you peeked between squinted eyelids, you could see Uncle Harry's mustache twitch in impatience now and then as the preacher droned on and on, for Reverend Carmichael was not one to miss any opportunity to sermonize.

Before the echoes of "Amen" faded, Uncle Harry would let out a loud "Aaaaah!" and plunge the large fork deep into the bird, releasing its golden juices with a spurt, and filling the room with an aroma that lingers still, in the family's memories.

To hear them tell it, nothing ever changed, but no one seemed to mind. There was a comfort in the sameness, year after year—a sense of tradition.

This year, as usual, the family began to arrive by mid-morning. Then someone lost his keys and summoned

Don to the rescue. While he was working, cars continued to fill the driveway and spill out into the yard under the big oak trees.

The men who weren't giving Don their unsolicited advice gathered in little groups here and there: in the living room, on the porch, wherever they could congregate without being in the way. Some half-heartedly kept an eye on the young children while swapping tales of their most recent exploits in business and pleasure. The women crowded into the kitchen and dining room, bustling about, putting finishing touches on their culinary creations and helping Aunt Mary with last-minute details.

Don had just finished his work and was writing up an invoice when eight-year-old Melissa stepped out onto the front porch to ring the silver dinner bell, traditionally used on this day to summon everyone to the bountiful Thanksgiving feast.

"How come she gets to do that?" Don heard her five-year-old brother ask in a loud voice. "I never get to do anything."

"Hush, Greg," said his father. "Maybe you can do something else, later."

Don entered the house with the others, intending to present the invoice and the keys to the vehicle owner, but by that time everyone was crowding into the dining room and Uncle Harry had already taken his usual carving stance at the head of the table and the preacher was holding up his hands and saying, "Shall we all bow our heads while I say grace?"

Don decided to wait a moment.

Suddenly a small voice cut through the generations of tradition.

"May I say it?"

Continued on page 101

TECHNITIPS

Helpful hints from fellow locksmiths

Send in your
tips and win.



by
Jake Jakubowski

HOW TO ENTER

Simply send in your tip about how to do any aspect of locksmithing. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Write your tip down and send it to: Jake Jakubowski, Technitips Editor, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107. Remember, tips submitted to other industry publications will not be eligible. So get busy and send in your tips today. You may win cash or merchandise. At the end of the year, we choose winners for many major prizes. Wouldn't you like to be a prizewinner in 1994? Enter today! It's easier than you think.

BEST TIP OF THE MONTH

If your tip is chosen as the best tip of the month, you'll win \$50 in cash! Plus, you may win one of the large year end prizes!

EVERY TIP PUBLISHED WINS

Yes, every tip published wins a prize. If your tip is printed, you'll win \$25 in Locksmith Bucks. You can use these bucks to purchase any books or merchandise from *The National Locksmith*. Plus, every tip published will win a copy of the Technitip Handbook.

These Prizes Awarded Each Month!

- All-Lock A 7000 VATS Decoder
- HPC Pistolpick
- Silca Rubberhead Keyblanks (100 Blanks)
- ESP PR-13 Professional Lock Pick Set
- Sieveking Products EZ-Pull GM Wheel Puller
- Technitips Handbook

Submit your tip and win!

Back in July, in an effort to speed the mailing of the prizes to our winners, I assumed the responsibility of getting the prizes out. Apparently, I made a few goofs and some winners didn't get their prizes in a timely manner. I apologize to each one of the winners for whatever delays there may have been.

If you're a future prize winner, and you don't get your prizes in the month that your tip appears in The National Locksmith, contact me c/o The National Locksmith, and I'll do everything I can to rectify the problem.

In the meantime, 1995 is just around the corner. That means we start a whole new yearly contest! So, get busy and start writing down your ideas and send them to me ... Y'all heah?

Tip Of The Month Winner Ford 10-Cut Door Try-Out Keys

If you own a set of the Ford Ten Cut try-out keys for the Ford ignitions, you can use them to determine the cuts needed to generate door key for these cars.

As you are aware, both the door and ignition on these vehicles are operated by the same key. The first six depths (from the bow) of the key operate the door, and the last six operate the ignition. Both the

door and the ignition share the fifth and sixth depth, which is what allows the key to work both locks.

I discovered this recently, when I was called out to unlock a new Lincoln Town Car. When I approached the car with my opening tools and wedges, my customer began to get hyper and literally began squealing frantically. I realized that if I were going to open this car without my customer getting hysterical, I would have to find a less physical method of doing so.

That's when I thought about the ignition try-out keys. I inserted the first key in group "A" all the way to the stop, and as I slowly withdrew the key, I rocked it gently to the left and right. Then I turned the key over and repeated the process (Remember: these keys are cut differently of each side).

The keys in group "A" didn't open the door but, the third key in group "B" turned the lock without a hitch. Apparently, by pulling the key back four spaces, the six cuts that would normally turn the ignition can become a tryout key for the door.

Since, I have used the ten cut try-out keys as a shortcut for fitting a key to the door lock on Ford and

Mercury products that utilize the ten cut configuration in their locks.

First, I find the key that will operate the ignition. Then, I start over with the keys on the door, when I find the keys that operate both locks, I have all the cuts required to make a operating key for the customer. Twice, I have found that the "reverse" of the key that operated the ignition, operated the door on the same car. I feel this was probably coincidental and not indicative of a pattern.

Remember most tryout key sets use half cuts so, you may still have to do some impressioning or progression to make a proper operating key.

Phil Lanier
North Carolina

Editor's Note:

Phil exhibited some good, solid ingenuity in responding to a customers needs in a thoroughly professional manner. At the same time, he found a new use for an existing and functional

tool the Ford 10-cut try-out key set. What some readers may not be aware of is that Ford ten-cut door locks normally pick open very easily. Simply apply light pressure with a tension wrench, and gently rake the wafers. The lock will move about ten degrees (left or right depending on the door you're attempting to open) and then with a few more rakes it will turn to the unlock position. Also, H.E. Mitchell & Co. makes a decoder for these door locks that I have used very successfully.

ALL-Lock Vats Decoder Winner Antique Trunk Key

One of my regular customers is an antique car buff and about six months ago had me generate a key for a 1928 Ford Roadster ignition that he owned and had lost the key to.

This week he came into my shop and told me that he had lost the key to the Excelsior steamer trunk that is carried on the back of the roadster.

The lock on the trunk was made by Excelsior and use an EX127K (Ilco T-139) keyblank. Now, I stock about 100 different trunk and luggage keys, but I did not have this one in stock. When I order luggage keys, I have to order a minimum of \$50 worth, and could not justify ordering that many keys for this one job.

By the same token, I wanted to help my customer and by using an Ilco 1427 keyblank and my trusty Dremel Tool, I was able to fabricate a key for the trunks.

Illustration one shows the Ilco 1427, which does not have a groove in it, and the modified version of the same blank. Using my Dremel tool, I grooved about 1/3 of the blades width along it's entire length (to the bow).

Each time I removed material (from both sides of the blank), I tried the key in the lock to make certain it would enter the keyway. Then, when I had the blank modified to where it would enter the keyway without difficulty, I smoked the blank and impressioned the depths with a warding file.

Naturally, I charge more for custom work, but by not turning away the unusual or difficult, more and more customer(s) work keeps coming back to me.

Larry Kanzer
Pennsylvania

HPC's Pistol Pick Winner Split Door Speed Nuts

Have you ever tried to re-secure the latch or bolt unit that no longer fit snugly to the door, only to find that the door was so poorly made that there was next to nothing to secure the latch or bolt unit to?

Recently, I had a customer who had four foam-filled steel doors on which the latches and bolt units had begun to wobble. When I removed the lock from the first door, I found that there was only a one-half inch thick stile in the door that the hardware attached to.

Since there is so little wood in the stiles of these doors, the wood tends to split when even the smallest attachment screw is used to secure the latch. Consequently, it is not long

before the latch or bolt begins to loosen in the edge of the door from usage.

Normally, I would use a MAG Instal-A-Lock or Don Jo reinforcement plate to resolve a problem like this. However, the doors and frames on these particular units were too closely fitted to allow me to get a plate around them and still allow enough room for the door to close.

The solution turned out to be very simple. I used speed nuts with longer screws to hold the latches and bolts snugly in place. Speed nuts are available from your local automotive supply store and are used to hold

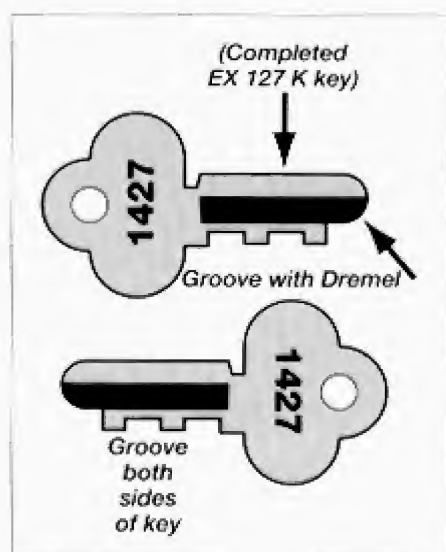


Illustration 1

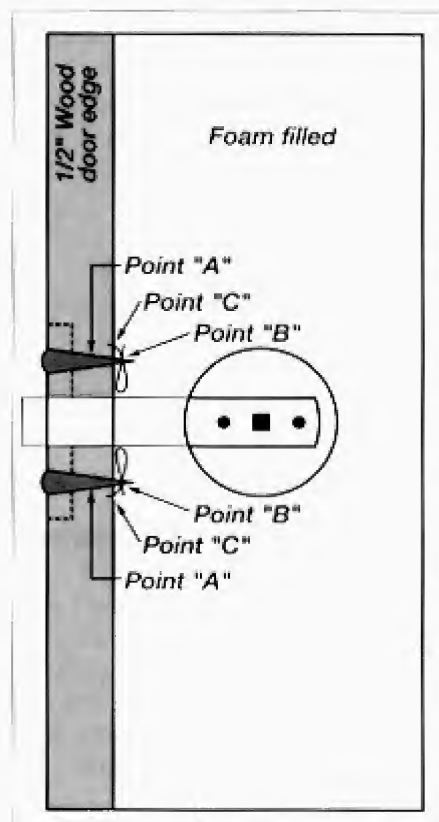


Illustration 2

automotive door panels and trim in place.

Just use a speed nut behind the door's wooden stile and allow your screw to thread through the speed nut. Placing the lip of the speed nut towards the wooded stile in the door allows the nut to grip the wood, without turning, while you tighten up the screw. (See illustration 2.)

Since the nut "flares out" when you tighten the screw, it spreads its holding power over a larger area and will not release its grip on the attachment screw. As a result, the latch or bolt stays firmly in place.

Needless to say, my customer was happy because they thought they were going to have to replace the doors.

Richard Quigley
Illinois

Silca Key Blanks Winner Pittco Aluminum Door Locks

I encountered a problem with what appeared to be a new Adams Rite type MS lock and cylinder. So far, I've only encountered it on Pittco aluminum store front doors

When removing these locks, you remove the three screws that hold the

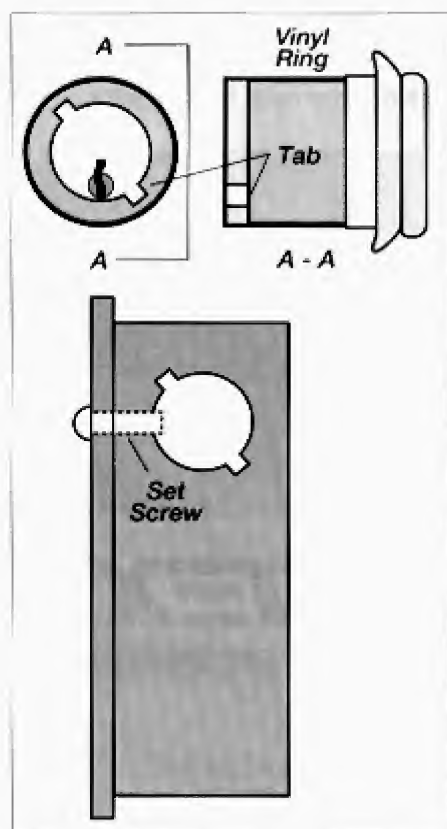


Illustration 3

face plate on and then loosen the set screw that holds the cylinder in place. Now comes the new part.

When you try to unscrew the cylinder it only turns about 20 degrees and then seems to bind up as if the retainer screw were still tight, or maybe the mounting screws were forcing the cylinder back against the edge of the cross-bore hole.

Don't panic and get out the Channel Locks! Just wiggle the cylinder up and down a little and pull straight out. The cylinder will come right out in your hand, since they don't screw into the lock but, have two ears that hold them in place and a flexible rubber gasket to hold them snug against the door. (See illustration 3.)

After removing, service the cylinder as necessary, insert it in the lock, turn it 20 degrees until it stops, tighten the retaining screw and replace the face plate. The lock body is threaded and will take a standard mortise cylinder if you simply want to change out the lock.

Billy D. Jackson
Texas

Editor's Note:

The type of cylinder Billy wrote about is not made by Adams Rite. I believe it is manufactured for Pittco somewhere in the Orient and is known as a "Bayonet cylinder." The flexible rubber gasket is necessary to keep outward pressure on the bayonet cylinder to keep it from moving in or out in the door frame. The lock body, according to my information, is made for Pittco by a firm called Ready Lite, or Redi-Lite. If my memory serves me well, the investment group behind Pittco, purchased the store front manufacturing facility from Pittsburgh Plate Glass when PPG divested itself of that operation's assets some years ago.

ESP Pick Set Winner Stuck Extractor Removal

I was called to remove a key extractor that had been trapped in the door lock of a 1993 Cadillac. A tow truck driver had attempted to open the car with a Slim Jim, and when that didn't work, he tried to pick the lock with the key extractor!

The barb on the extractor caught

behind the wafers of the lock and would not come back out. The customer called me and wanted to know if I could take the lock apart and get the extractor out. Taking that lock apart, with the lighted ring and all the electronics in the door, was the last thing I wanted to do.

Instead, I used an uncut blank, milled about one-half the thickness off of the blade and inserted it in the lock, beside the key extractor. Since the blank was uncut, it depressed all the wafers in the lock to their number one depth. That kept the barb from grabbing the wafers and allowed me to easily pull the extractor out of the lock.

It sure beat tearing down the door panel.

Steve Briarton
California

GM Wheel Puller Winner Removing GM Ignition Retaining Screw

I never thought I would have a tip to send in. However, here is something I would like to share.

When removing the switch on the new General Motors tilt wheel with the square column, I have run into difficulty removing the ignition lock retaining screw that sets under the tilt pressure spring and buzzer switch.

Apparently these screws are driven into the column, cutting their own thread. This makes it very difficult to remove.

I've discovered that if you use a soldering iron and heat the screw it will come out easily. You need to be careful to keep the plastic buzzer switch out of the way of the soldering iron to prevent damaging it.

Eugene Taitt
Colorado

Technitip Handbook Winners Mounting Deburring Wheel

If you need a wire wheel to buff the burrs off freshly cut keys and don't have a shaft to mount it on, here's an idea you might be able to use.

Use a 1/4x2" long carriage bolt, with the necessary washers and nuts, and mount the wheel on an "L" bracket. (See illustration 4.)

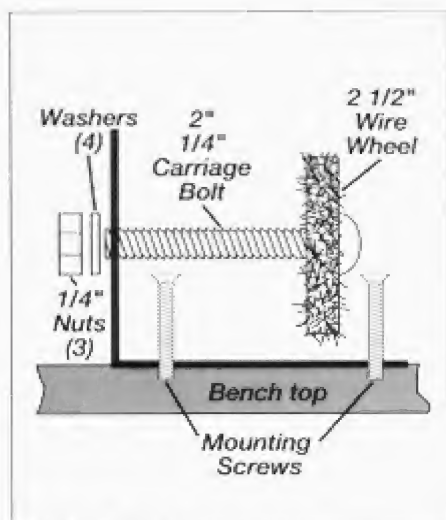


Illustration 4

After cutting the key, simply pull it through the wire wheel to de-burr it. As the wheel wears, rotate it for a fresh set of "whiskers".

This works great for me both in the van and in the shop. In fact, I took my wire wheel off my mobile key machine and replaced it with a grinding wheel instead. It works great to shorten key blanks and sharpen tools, etc.

R. Lazich
Wisconsin

Front Shim Pick Padlocks

So far, all the brands of imported padlocks that I have seen (King, Lion and Olympus are three brands that I can actually identify) have no front ridge on the cylinder plug. Therefore, they are all easily shim picked from the front of the lock at the shear line.

By inserting the shim at the front of the plug and using the pick to manipulate the pins, I can usually open one of these locks in about thirty seconds.

Try it on the next imported lock you have to open for a customer that has lost their keys. It's even faster, for me at least, then getting out the bolt cutters!

Ron Somers
California

Quick Adams Rite Cylinder Retaining Screw

While servicing a narrow stile mortise lock the other day, I found I did not have a retainer screw long enough to replace in the lock.

I cut a Kwikset retaining screw down to the proper length, cut a slot in

the top of it and inserted it into the lock. It worked just fine.

Juanita Ramsey
Texas

Quick Pick Number Stamps

The Evers number and letter stamps that I use to mark my keys never seem to be easily identifiable without picking them up and looking at the letter or number.

So, I used red finger nail polish to mark each stamp and also to let me know the proper position to hold it in. Now, no matter what position they're laying in on my workbench, I can always grab the right one and automatically know which way to hold it for the proper alignment of the letters or numbers.

Tim Hopkins
Nebraska

Extra Hand Door Holder

When changing a concealed, overhead closer it is always a good practice to have a helper to work one side of the door while you work the other. That way if things get a little

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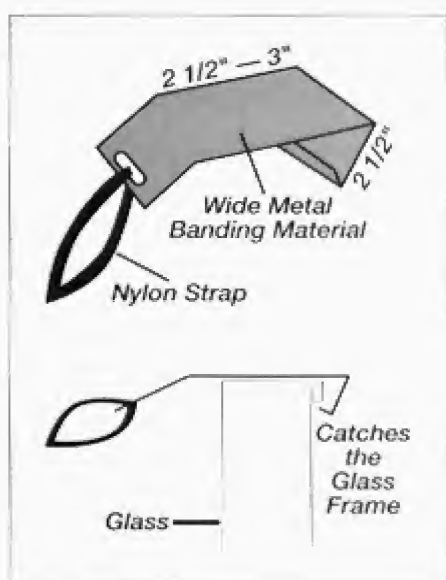


Illustration 5

tricky or difficult, there is always someone to help steady the door.

However, when you do have to work on a concealed closer alone, I have found that it helps to have the following items on hand.

An assortment of longer hex bolts to help hold the block in place and for pulling the door into position when the regular bolts are too short to do

the job. And a nylon and metal strap that I made to hold and draw the door in when necessary and to keep it under control while you're working on it. (See illustration 5.)

Lee Whiteford
California

A Tip For Tip Submitters

This tip is for all those who submit tips to The National Locksmith. Be careful when sending your tips in on the tear out card in the magazine.

You may want to enclose your tip in an envelope to keep it from being read by the wrong person.

Rick Sullivan
Texas

Editor's Note:

Since we started using the Technitip cards, tip submissions have increased. During that time I have received three tips similar to Rick's. I do suggest that if your tip is sensitive in nature, then you should enclose it in an envelope. However, I feel that the Technitip card is a valid means of sending in most tips. Regardless what method you choose to send me your tips keep them coming.

You are all doing a great job in making this column successful.

Foreign Tension Pin Removal

Here's a couple of tips, old and new, that I use for removing the tension pins used to hold some foreign ignition cylinders in the housing. These are always trouble to remove without doing some drilling and some prying, yet I have found a few ways to make it much easier.

The first method involves drilling straight down next to the pin. When just deeper than half the length of the pin, angle the drill into the side of the pin and make a very small indentation or drill point mark. This allows an area that the scratch awl can bite into for removing the pin.

A second way of removing the pin involves finding a paper clip or spiral key extractor that just fits down the center of the pin. Apply super glue to the end of the clip or extractor and put it into the center of the pin. Let it set a few minutes and then gently pull the pin out.

Elmer Bletch
Iowa



ASP Covers the World of Auto Locks

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BITS & PIECES

Informative Tidbits for the Security Industry

Be advised that many of the post 1993 GM ignitions are being found without codes stamped on them. If this is the case, it is often possible to make a key by reading the numbers stamped on each wafer.

Unless you are blessed with very good eyesight, an otoscope is helpful.

Treskat is now offering a new software program for finding the unknown cuts of a broken key called KeyWiz.

By entering a partial bitting of a key into the computer, the locksmith is given all bitting possibilities for that key. Because the program uses only those bittings from the code series used for that keyblank, the locksmith is often left with only a few keys to cut and try.

This program is extremely useful when only part of a broken key is available or for auto work where some of the key's bittings are available through a door or glove box lock.

Mayflower Sales Co., Inc. is offering a new Automotive Security Source book. The book features products supplied by Auto Security Products, All-Lock, Briggs & Stratton, AI, Concord, Pro-Lok and Valentine. A copy can be obtained by calling Mayflower at 800-221-2052 or 718-622-8785.

According to *The National Locksmith* tech writer Michael Hyde, the 1996 Mercedes-Benz re-designed "E" Class vehicles may come equipped with a new type of ignition lock assembly. Should the wrong key be inserted into the ignition, the key will turn freely in any direction



by
Tom Seroogy

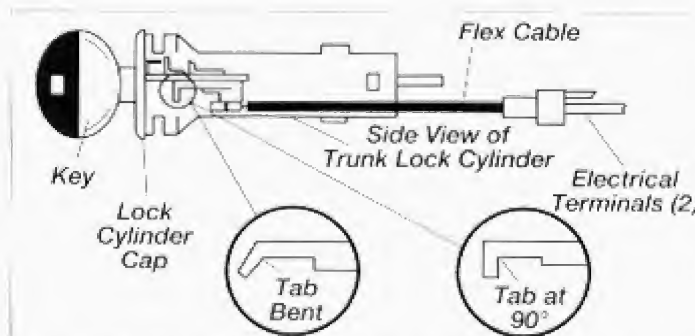
activating nothing but the alarm. A clutch mechanism built into the ignition allows the correct key to operate in the normal manner.

Tom Mazzone, *The National Locksmith* technical writer forwards this little bit of information on the Ford.

Have any customers suffering from their Ford product security system giving false alarms? Listen to this:

Ford is apparently suffering from some minor trunk lock problems. The problem affects 1989 T-birds and Cougars, and 1988 through 1989 Continental Mark VII and Town Cars. These vehicles are equipped with anti theft alarms and have a switch attached to the trunk lock.

The problem has been false alarms caused after a small tab making up the switch becomes bent. As seen in illustration one, the normal tab should have a 90 degree bend. Once bent out of position, however, the switch may cause the alarm to activate without cause. Ford recommends replacing the lock. (See illustration 1.)



1. The Ford trunk lock showing bent and good tabs.

To check the lock, open the trunk and disconnect the electrical terminal going to the lock. Using an Ohm meter check the lock side connector for continuity. If continuity exists, remove the lock and check the tab on the switch. If it has been bent, replace the lock. If not, reinstall the unit and

check for continuity again, if continuity still exists, replace the lock regardless of the tab's condition.

If continuity does not exist, the lock is okay. If false alarms continue, refer the customer to a dealer for further service.

The replacement locks generally come packaged with a glove box and stowage box lock (depending on model). Make sure and replace or rekey these locks when replacing the trunk lock.

Arrow M series locksets no longer accept lock cylinders with horizontal (Schlage type) tailpieces.

In the past locksmiths have been able to use replacement cylinders in the knobsets with tailpieces in either the horizontal or vertical position. This is no longer possible as Arrow has changed the key cam on the new M series to accept only vertical tailpieces.

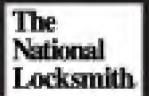
It should be noted that notification of this change was not released until after Giles Kalvelage's article on the M series lock (*The National Locksmith*, September 1994).

Other changes that Arrow has made includes the door thickness requirement for the M series Sierra lever. Past units fit both 1-3/8" thick and 1-3/4" thick doors. The new units will fit 1-3/4" doors only.

Briggs & Stratton has made of few design enhancements to the new ignitions introduced on the 1994 GM N body vehicles using the GM 10-Cut system. Effective June 15th,

1994 all 10-Cut ignition locks will no longer use the 2 and 3 space of the lock cylinder. Instead these tumbler cavities will be filled in. This, of course, means that the lock will now only hold seven tumblers (spaces 1 and 4 through 9).





by
Dale Libby

BAKED OR FRIED? THE BRINKS CASHGARD

*Like ordering at a restaurant,
there's always more than one choice.*

The title of this article means something specific to me. It shows that in real life safecracking, there are more than just two choices. There is always more than one way to open a safe, and the more experienced you get at safe opening, the more choices that can be made. In fact, given any problem, there are many solutions.

Limits that are imposed by the customer - time, location, price, and mental (?) attitude - determine exactly what alternative and selection is used and what price is charged. I really get irritated when a customer calls my company, SAFEBUGSTERS, and wants me to open a safe. Once I'm there, the customer then tells me how I should open the safe. It cannot be drilled, but must be dialed open, they state. Their cousin or brother told them this is the only way it should be opened.

After explaining the real facts (briefly), I either do or pass up the job. My mental attitude is now what is important.

Anyway, on to the derivation of the "Baked or Fried?" battle call that I and a few others use. On a recent trip from Lake Geneva, Wisconsin, (The Beautiful) Jane and I decided to stop in Bigfoot (It really Exists), Illinois for the Famous Big Foot Inn Friday Fish Fry. On this particular summer night, there was a long line of patrons outside the door of the large restaurant. These people were waiting patiently for their turn to eat the

famous fish prepared at this establishment.

We were eventually seated, and watched the waitresses run around serving the hungry patrons. The harried waitress would go up to the table and take the food orders by repeating the phrase "Baked or Fried," giving each customer one of two choices. That was the rallying call throughout this restaurant. "Baked or Fried?" Baked or Fried?, Baked or Fried, etc. ad nauseam.

When our turn eventually came and the waitress gave us the formal battle cry of "Baked or Fried?," Jane calmly stated that she wanted to see the menu. There was a momentary hush throughout the restaurant while the waitress tried to find a menu. Jane and I both ordered off The Menu. The rest of the patrons considered us 'outsiders.'

Again, the purpose of this story is to show that there are always more than 2 choices for most problems. We as professionals, are expected to make the correct choice. Sometimes we do, and when we don't, we write articles about them.

For example, I was called on to open a "BRINKS" safe for a car dealer. The label on the door said Diebold CashGard. The name on the large handle was Brinks.

This was a drop money chest about 40 years old. After turning both the guard and renter's key, the door is

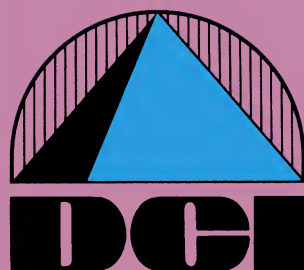
turned 1/4 turn to the right (Clockwise) and then it is lifted out. The money chest was housed in a 3 cubic foot block of cement and steel above the floor. Very Heavy.

The owner of the car lot was rather old and clumsy, and dropped the guard key into the drop slot while trying to open the money chest. It was the only copy that he had, and I was called in to magically open the unit.

Before I got there, his chief mechanic and yardman decided to try and force the lock open by beating a screwdriver blade into the hardened steel lock guard above the guard keyway. He managed to break off the end of the screwdriver in the bottom of the hardened guard above the lock thus effectively blocking all access to the guard side of the lock.

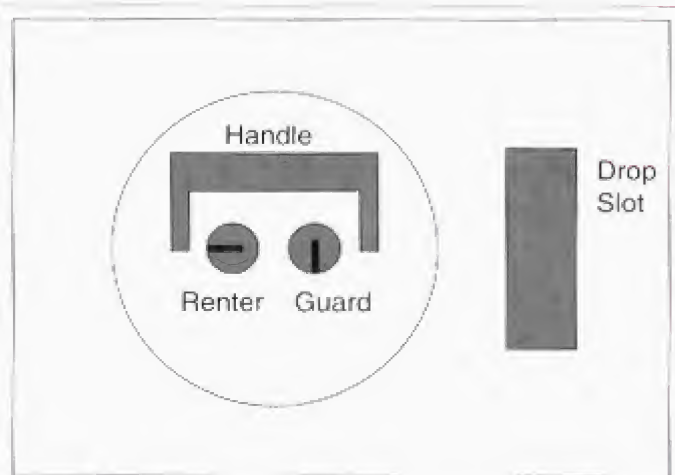
I had several choices to make (Baked or Fried). I could try to clean out the keyway, and then drill and pick the guard levers to the proper gate position. Since I did not know what other debris was dropped or forced into the keyway, and what other trash might be inside the lock at this location, this was not a viable form of entry.

By the way the safe was located on a carpeted floor, moving the safe and trying a side attack was also out of the question. I then asked the elderly owner if possibly he might want a one key operated safe door. He said that would be great and much easier than



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1. The Brinks Cashguard safe.

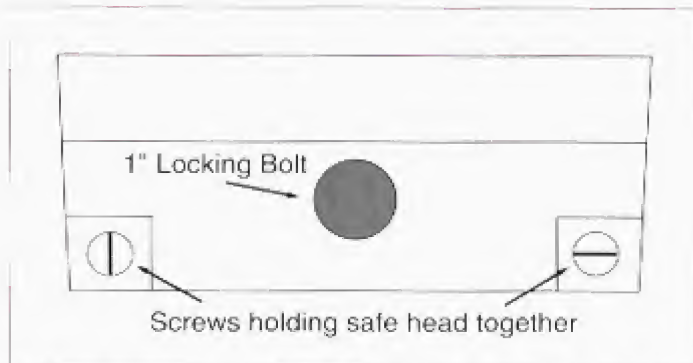
having two keys to use each time he wanted the money chest open.

This was the plan of opening I wanted from the beginning, but I made the customer think that he had chosen it from a long list of options, and that this was going to be the hardest opening. Once we settled on a fair price I began the opening.

Diebold uses hardplate and hardened steel on any unit labeled with the dreaded and diabolical CASHGARD classification, designation, symbol, and emblem. We

all have seen it. It means we can charge a fair price for the amount of work that we will have to do.

I have opened these units before, and it is not a gentle opening by any means. To get to the lock, one must first remove the guard trunion (?) or hardened nose piece above the guard key hole in the safe deposit lock. This piece is effectively shouldered and hardened so that it cannot be pulled. The piece is about 1-5/16" in diameter, but the hole in the door is only 1" in diameter. (See illustration 1.)



2. These two screws hold the two halves of the safe head together.

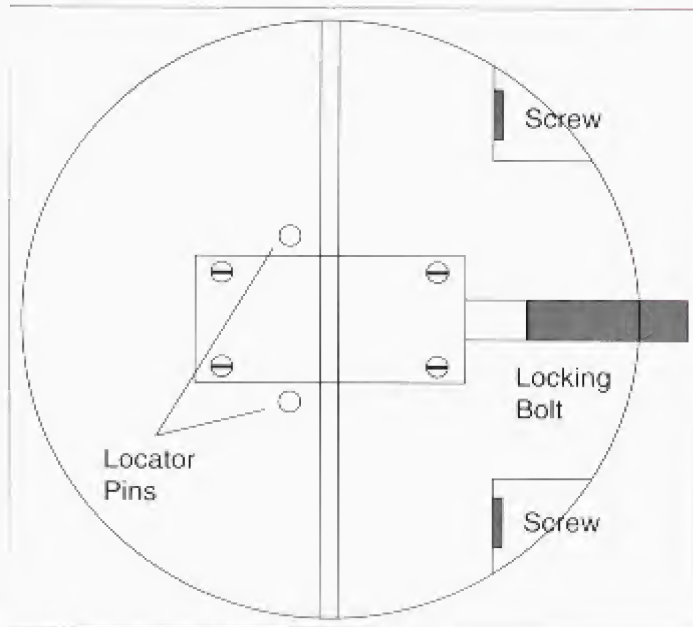
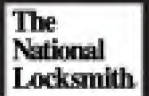
The fastest way that I have figured to do this is to use a small Makita grinder with a 4" cutting wheel. Cut across keyway until you are grinding the upper edge of the door and cutting into the hardened edge around the keyhole. Once you have ground the lip off, just move the hardened nose slightly and continue to grind off the 1/4" (approximately) lip that secures the lock guard.

By grinding, moving, grinding, using the ruined keyway as a guide, the lip will soon be big enough to extract the hardened guard. If you only want to do grind one side of the guard nose that is OK.



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3. A top x-ray view of the safe head.

With one side of the lip (180 degrees) gone and the shoulder showing, put a very large screwdriver or punch in the existing keyhole, and punch downwards. This will split the guard, and the smaller side of the broken nose plate guard can be extracted first. The larger side can be usually pulled quickly with a few touchups from the grinder.

door will open after turning the whole head to the right and lifting out.

The door disassembly is rather unique. There is no bottom plate. Instead, the door is screwed together. On the side of the door on either side of the circular locking bolt, there are two standard 1/2" screws that one

Using a regular safe deposit box puller, the nose and trunion of the existing Diebold safe deposit lock can then be pulled. Once the tumblers are exposed, they can be raised to the correct opening position, or perhaps better and faster, can be broken off easily or pushed to the side.

Once the levers are out of the way, the renter's (owners) key is inserted and turned to the right. With a little more finagling, the

must use a large screwdriver to loosen. (See illustration 2.)

Once the screws are loosened and removed, the door can be pried apart into two halves. Each half is 'clam-shelled' to a bottom mounting land. The door plates are 3/8" thick. There is no relocking device or trigger on this lock, in fact, I think that trying to punch this door would be impossible, for the lock rests on the bottom of these two dove tailed plates. There is no room to punch anything.

The rest of the door unit is made up of the two (now one) guards for the keyway, a hardened plate guard that goes over the lock, and the double key safe deposit lock. The locking bolt is attached to the end of the standard bolt and is 1" in diameter.

Also, there are two locator bars about 3/16" in diameter. These bars fit above and below the lock, and insure the proper alignment of the lock and opening bolt when the two halves of the bottom of the door are pressed together. It is impossible to put this door and lock together improperly with all the parts present. (See illustration 3.)

Continued on page 102



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SEROOGY SPEAKS

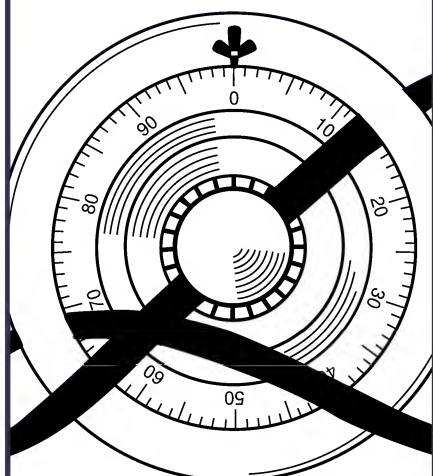
Notes from the Managing Editor

Frequently I receive mail from locksmiths frustrated over manufacturers who supply locks and security products through large chain stores directly to the public. The frustration arises when we see the same products being sold to the public at nearly the same cost for which we purchased them from our distributors.

How are we to compete? How can the manufacturer cut the locksmith's throat? Shouldn't we boycott the manufacturers and distributors of these products?

While the frustration runs high, this complaint raises two issues. The first is, to whom is the manufacturer responsible? The second, who is our customer?

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About manufacturers first. There are two types of manufacturers. Those that produce products for the locksmith and those that produce products that the locksmith uses and installs.

The first type of manufacturer produces specialty products that require a degree of technical and professional training and competency known only by a locksmith. They solicit and sell their products through locksmith chains only. With this group there is little controversy.

The second type of manufacturer produces a product that fills a market need and sells those products through many venues; i.e. home centers, auto parts stores, locksmith distributors, door and hardware distributors, etc. It is this group with which we are usually concerned.

Having manufacturers sell to outside vendors what locksmiths have provided for years will always be a battle. It's been done with a wide range of products.

While I truly wish that this were not the case, as locksmiths, we need to look at the cold and hard economic reality - None of the products or services were created by or for the locksmith. To apply an old adage, to believe that these products and services were created for the sole benefit of the locksmith is like the tail wagging the dog.

The products we often view as "locksmith" products are produced to fill market needs. Locked cars need car opening tools, doors need door hardware, autos need auto locks. Manufacturers produce products to fill these needs and then find the most profitable venues to sell these products.

Knowing this, it's only fair that the manufacturers of these products sell them where they are going to benefit

most. That's what a free market is all about. That's what they are in business for! Just as we are. To suggest that manufacturers of locks and lock related products sell only to locksmiths is like auto mechanics telling Fram Filter they cannot sell their products to Advance Auto Parts, K-Mart, Good Year or Firestone. It just won't happen. These products are not created for the locksmith, and if "ownership" is to be applied, they would rightfully belong to the automotive and construction trades.

Still, most lock and lock related manufacturers are aware of the solid impact that locksmiths have on their business, and have built marketing and distribution networks to serve us. Many offer seminars and training courses to help the locksmith increase his competency and technical ability concerning their product. Let's take advantage of them, and patronize those distributors that carry their lines and serve us well.

The second issue is, who is our customer?

I have to admit to purchasing a few items to repair my own van. Why didn't I go to a mechanic? I think the answer is quite simple; locksmiths are typically Do-It-Yourselfers. We hate to spend money on something we can (or think we can) do ourselves. The general public is no different. Yet, the preponderance of aftermarket auto parts stores and the number of backyard mechanics seems to have little affect on the auto mechanic and the auto repair business. How come?

Do-It-Yourselfers will always exist. In exchange for saving a few dollars, these people use their own time and expend their own efforts. Most often the finished job is not all that attractive, complete, or correct. No amount of advertising will appeal to this group. Even the best marketing

Continued on page 102

THRU THE KEYHOLE



A Peek at Movers & Shakers in the Industry

**ATTENTION MANUFACTURERS
AND DISTRIBUTORS:** Would you like
your company and products to be
profiled in *Thru The Keyhole*? Please call
Managing Editor, Tom Serocgy at
(708) 837-2044.

A Shining Example Of Quality

When Briggs & Stratton Technologies won Chrysler's Platinum Pentastar Award, and more recently General Motor's Worldwide Supplier Award, it was really the culmination of the company's long-term commitment to manufacturing excellence. Both awards recognize high levels of performance in product quality, just-in-time delivery, service

and price. Winning even one of these awards puts a company on a select list of approximately 400 suppliers to North American auto makers. In winning more than one, the list is much shorter. Only 17 suppliers *worldwide* have achieved this distinction.

What sets Briggs apart is its customer-driven focus. Multi-disciplinary teams consisting of Sales, Engineering, Quality, Manufacturing and Purchasing work together from concept through design, testing and production, to develop products that meet the customer's specifications. Customers are an integral part of this process, creating a partnership that enables Briggs to anticipate customer needs through every stage of product



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development and manufacturing.

A sign hangs above the department in the corporate offices of Briggs & Stratton Technologies. It says, simply, "Quality." Not only does this sign identify the department, it is a mission statement—the driving force behind the company's dedication to excellence. And nowhere do they take quality more seriously than in the testing lab.

"You can have the best manufacturing capabilities, but if you can't verify strengths and weaknesses through testing, then you won't know the quality of the product," according to Laura Nerad, Quality Coordinator.

Nerad sees the testing lab, "the jewel of our capability," as the hub of the quality-assurance process. Using advanced equipment and precise methods specified by auto manufacturers, prototypes are tested and verified. Testing continues through the design and manufacturing stages. According to Mary Gellendin, Test Lab Supervisor, "Our goal is not only to meet, but to exceed customer expectations. We deliver products to the customer that have an operating life at least four times greater than the specification. This assures customers about the reliability of the parts and increases their confidence in us as a preferred supplier."

The partnership between Briggs and their customers in the auto industry extends to locksmiths. "This same high-precision product that has been specified and tested for the original equipment manufacturer is provided to the locksmith in the aftermarket. Quality is never compromised at this level," says Paul Glatzel, Briggs & Stratton Technologies' Quality Manager. Through an extensive authorized distributor network, locksmiths have quick and ready access to wide range of inventory with on-going training and support.

This relationship between auto manufacturers, Briggs & Stratton Technologies and locksmiths completes the quality circle, and everyone benefits.

"Our hope is that the biggest winners here are the locksmiths' customers," remarks Scot Hooper, Aftermarket Sales Manager. "When all is said and done, it's the highest quality products, properly and

professionally installed that really benefit the automotive consumer."

Major Manufacturing's New Installation System

A new generation of installation tools has been introduced by Major Manufacturing. At the center of the system is their HIT-45 modular clamp. Featuring a new clamping design, the HIT-45 will work on aluminum, wooden or hollow metal doors. The HIT-45 has a grip range from 1-1/4" to over 2-1/4" without the use of additional adapters or special plates.

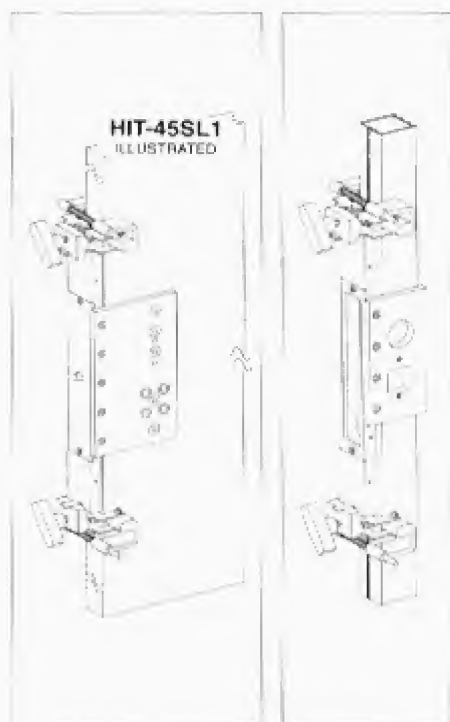
Clamping pressure is positive with the HIT-45 always being self centering by design. The use of two internal locating studs assures that backset is calculated from door center, regardless if used on flat, beveled or radius doors. The HIT-45 will work with many types of installations including Adams Rite hardware and mortise lock preps. Major Manufacturing has many accessories in development for this system. Let's follow several typical installations.

For Adams Rite installations, choose the template guides required

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and install on the clamp. The HIT-45 when clamped to the door will self center and is ready for use with no adjusting or measuring. Drill a 1/2" hole in the center of each opening to be routed. This is used as a starting hole for the router bit. The aluminum

to be routed is brushed or sprayed with a cutting lubricant, and using a router with a 3/8" guide and 1/4" bit, the opening is routed. If installing a lever handle or lock indicator, all necessary mounting holes are located and can be drilled at this time. The door prep is now complete, just add Adams Rite mounting bridges and install lock.

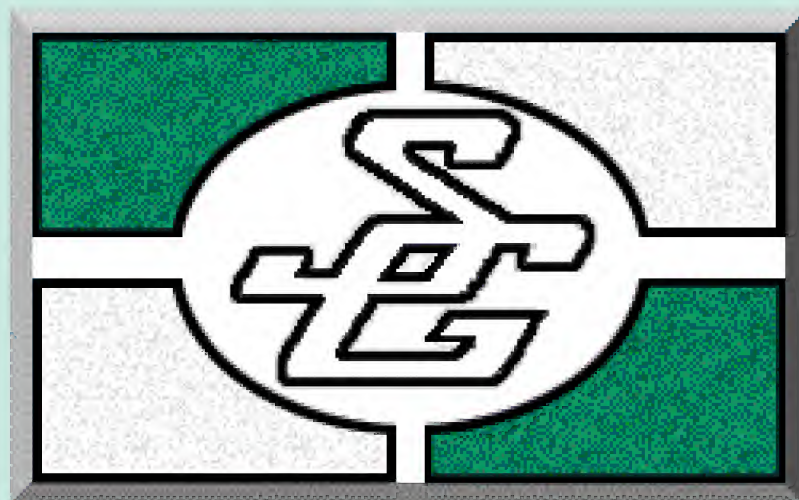
To prepare a mortise lock cavity to accept a mortise lock, simply attach the correct installation template to the HIT-45 Clamp. A two part positioning fixture is also needed, this will align the template correctly in regards to the mortise pocket. Once the template is clamped to the door, all required holes are located with hardened drill bushings. Larger hole for mortise cylinders and T-turns are located with 1/4" guide holes and enlarged with the proper sized hole saw. The templates are reversible so both sides of the door can be prepped with same plate. Remove the HIT-45 and positioning tool from door and install the mortise lock. With the use of a HIT-45 you can expect fast and accurate installations every time.

1-800-LOCKSMITH Goes National

Two years ago Jacob Goldberg expanded into the general locksmith business as a compliment to his security business. As a marketing gimmick and as a way to stand out from the crowd in the Yellow Pages, he hooked up a toll-free 800 number that could be easily remembered. So was born 1-800-LOCKSMITH.

Goldberg expected to get calls but he never expected the number to take on a life of its own. Suddenly the phones started ringing and within three months they were receiving over 1,000 calls a month from the New York area alone and another few hundred from all parts of North America.

In the beginning, Goldberg and his crew were able to handle the calls that were coming in but it soon became so overwhelming that they had to turn away business that wasn't in New York city itself. It was no longer cost effective to travel to New Jersey, Long Island or Westchester unless they charged the customer travel time. They thought about setting up a regional network but were too busy.



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800 Inc. came along just at the right time. David Baum, who had a history in marketing, founded the company in the beginning of 1994 to fill what he saw was a huge need waiting to be filled. Vanity 800 numbers, numbers that translate on the telephone dial into words, are extremely effective as a marketing tool. They are easy to remember and they are toll free. In the past few years many companies and corporations of all sizes have hooked up 800 numbers that either describe their business or spell their name or are just gimmicky in order to attract customers. As Baum explained, just as many people will dial 800-FLOWERS as will call their local florist because most people don't know the phone number of their local florist. (Most people don't know the phone number of their local locksmith either.) 800 Inc. aims to take the hundreds of catchy effective 800 numbers being used in this country on a local market level, such as 1-800-LOCKSMITH, and expand them to a national level. And so he called Goldberg and gave him his vision of the number.

In the next year, 1-800-LOCKSMITH plans to sign up 2,000

locksmiths coast to coast as "authorized agents of 1-800-LOCKSMITH" who will be given exclusive rights to a certain geographic location based on zip codes. For this privilege, the locksmith will pay a monthly fee plus 5 percent commission on the service calls. All calls will be answered and dispatched from their already existing dispatch center in New York. While the customer is on the line the locksmith who has territory in which the call originates will be dispatched. The locksmith will have unlimited rights to use the name and the logo and 1-800-LOCKSMITH will do local radio and television advertising on their behalf. For more information interested locksmiths can call 800-LOCKSMITH, 24 hours a day, seven days a week.

APR*AMERICAN STAINLESS STEEL EXIT DEVICE

All locksmith's are looking for ways to increase sales. One way is to open new markets. The new 100 percent Stainless Steel APR*AMERICAN ED22 brand exit device now allows the local locksmith to dabble in an area that



was excluded to him by high market price and long special order time for high contract hardware. The ED22 is a moderately priced off the shelf exit device that is 100 percent stainless steel inside and out. This exit device now allows locksmiths to call on all accounts where environmentally harsh conditions exist, pool areas of hotels, YMCA's, schools, any area exposed to salt water or harsh chemicals and provide a quality product at a reasonable price. Because of its relative ease in installation, the ED22 is a reliable money maker even for a locksmith who is new to this end of the business. For more information on this product, contact APR INDUSTRIES INC., PO Box 342, Boonton, NJ 07005 or call 800-729-2674.



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KEY CODES

1994 GM Codes

LA00-LZ99

HPC 1200 GM

Code Card - CF215

Cutter - CW1311

Stop - 1054R Tip Stop (Ford 10-Out)

Framon

Cut start - .216"

Cut to cut - .092", Spacing Block #3

Cutter - FC6445

Key Clamping - Lay spacing die

F2MS552 flat on left side of vise and align from tip.

Cuts

Cam - GM6

Carriage - GM6A

KEY BLANKS

B&S 5995936

Silca GM37(EF)

Curtis B82

Ileo P1102

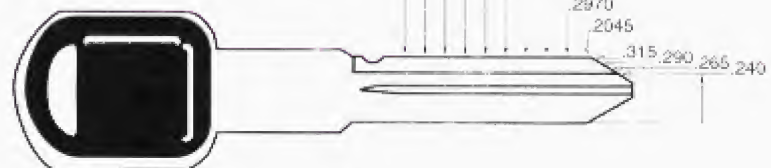
Jet B62(PH)

EZ B62

ESP B82

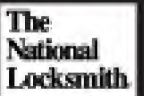
 Spacing and Depths using
 Universal Micrometer
 Card #56.

	Spacing	Depth
1	.1850	.315
2	.2775	.290
3	.3700	.265
4	.4625	.240
5	.5550	
6	.6475	
7	.7400	
8	.8325	
9	.9250	
10	1.0175	


 Key
 Profile

LA00	2123442124	LA37	2123242113	LA74	2123343234	LB11	2124213344	LB48	2123133234	LB85	2124311334
LA01	2131133224	LA38	2123423242	LA75	2123323243	LB12	2123443423	LB49	2124354232	LB86	2123344323
LA02	2123211213	LA39	2124434334	LA76	2123313134	LB13	2131123242	LB50	2124313313	LB87	2124233132
LA03	2131224334	LA40	2124233244	LA77	2131232312	LB14	2131234344	LB51	2123343124	LB88	2131122444
LA04	2124311213	LA41	2124331212	LA78	2124331213	LB15	2123213433	LB52	2123242432	LB89	2131224333
LA05	2123212132	LA42	2124224334	LA79	2124221134	LB16	2123431334	LB53	2123344213	LB90	2124243133
LA06	2123343312	LA43	2124423342	LA80	2124421322	LB17	2123442334	LB54	2124432122	LB91	2124242312
LA07	2124243234	LA44	2124342113	LA81	2124233124	LB18	2124213324	LB55	2124322334	LB92	2123442442
LA08	2131232443	LA45	2123312234	LA82	2124233422	LB19	2124344222	LB56	2123442122	LB93	2124321322
LA09	2131221134	LA46	2124313232	LA83	2123233433	LB20	2131223423	LB57	2131211324	LB94	2124234324
LA10	2123344212	LA47	2131232113	LA84	2123323313	LB21	2131134223	LB58	2123213232	LB95	2131133432
LA11	2131234323	LA48	2124313442	LA85	2123131232	LB22	2124321324	LB59	2124211233	LB96	2124323344
LA12	2123421134	LA49	2123443312	LA86	2124213243	LB23	2123423434	LB60	2123323213	LB97	2123324213
LA13	2124423113	LA50	2124224333	LA87	2124321344	LB24	2124421243	LB61	2124213423	LB98	2124334323
LA14	2124424313	LA51	2123132244	LA88	2124224342	LB25	2124212312	LB62	2124232334	LB99	2131212132
LA15	2123212334	LA52	2131123132	LA89	2124244334	LB26	2131223123	LB63	2123244313	LC00	2124343244
LA16	2123433432	LA53	2123134212	LA90	2123433124	LB27	2123134313	LB64	2123134322	LC01	2124212332
LA17	2131121243	LA54	2131213234	LA91	2124343422	LB28	2124213242	LB65	2123124433	LC02	2123323113
LA18	2124434212	LA55	2123312422	LA92	2131122133	LB29	2123211324	LB66	2131232124	LC03	2124213312
LA19	2124432112	LA56	2124244313	LA93	2131124242	LB30	2123132113	LB67	2124233242	LC04	2124313244
LA20	2131122334	LA57	2124423433	LA94	2124312513	LB31	2124322433	LB68	2131134424	LC05	2123213342
LA21	2123442434	LA58	2124334333	LA95	2123431344	LB32	2123423212	LB69	2123132324	LC06	2123324343
LA22	2124212333	LA59	2123244312	LA96	2131134222	LB33	2124434422	LB70	2124422342	LC07	2123443232
LA23	2123242334	LA60	2124432242	LA97	2131212324	LB34	2124311342	LB71	2124311244	LC08	2124243124
LA24	2124223313	LA61	2131233423	LA98	2124323313	LB35	2124311232	LB72	2123213344	LC09	2124243423
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LA26	2124212133	LA63	2131234233	LB00	2123233243	LB37	2124221343	LB74	2123442112	LC11	2131132432
LA27	2131233123	LA64	2123442212	LB01	2124424433	LB38	2124312332	LB75	2123433422	LC12	2131234232
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LA29	2131131243	LA66	2123443233	LB03	2123244334	LB40	2124312133	LB77	2123442312	LC14	2124243434
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LA35	2124331323	LA72	2123433134	LB09	2124423423	LB46	2124343134	LB83	2123424343	LC20	2123213243
LA36	2123424242	LA73	2123243313	LB10	2124421244	LB47	2131221233	LB84	2124231342	LC21	2124422113

The new 1994 GM code series includes 405 pages of over 100,000 active codes. GM, however, is not using all of the codes in any given year and the codes are being picked at random. To better serve the locksmith, over the next few months *The National Locksmith* is printing only those codes that have been confirmed to be in use on this year's GM vehicles. If you have a code that is not included, you can get the bitting by calling us at (708) 837-2044.



1994 GM Codes LA00-LZ99

LC22	2123443313	LC92	2123243233	LD62	2124234432	LE32	2123344313	LF02	2124324324	LF72	2123321213
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LC24	2124323234	LC94	2123132132	LD64	2124213434	LE34	2123422444	LF04	2123213123	LF74	2131132444
LC25	2123231323	LC95	2124234422	LD65	2124431123	LE35	2124323324	LF05	2124421242	LF75	2123213134
LC26	2123443234	LC96	2124433124	LD66	2123313312	LE36	2131224312	LF06	2124431213	LF76	2131233243
LC27	2123213124	LC97	2131134224	LD67	2124313224	LE37	2124243235	LF07	2124421332	LF77	2123234344
LC28	2131224322	LC98	2131212444	LD68	2124332243	LE38	2124421343	LF08	2124213133	LF78	2131123424
LC29	2124432324	LC99	2124213112	LD69	2123213313	LE39	2123434323	LF09	2123424332	LF79	2124313342
LC30	2131231124	LD00	2124344213	LD70	2124424343	LE40	2123243432	LF10	2124432432	LF80	2124434243
LC31	2124313122	LD01	2123312332	LD71	2124224432	LE41	2123224312	LF11	2131124342	LF81	2131224343
LC32	2131212433	LD02	2131213224	LD72	2131234244	LE42	2124324422	LF12	2123244324	LF82	2131123424
LC33	2124313233	LD03	2131123443	LD73	2123313444	LE43	2124244243	LF13	2124432434	LF83	2123342235
LC34	2124243324	LD04	2123221344	LD74	2124421333	LE44	2123234312	LF14	2123224433	LF84	2123421344
LC35	2124334233	LD05	2124332112	LD75	2124233423	LE45	2123133123	LF15	2123312123	LF85	2131221323
LC36	2123323443	LD06	2131134244	LD76	2124434324	LE46	2124211333	LF16	2123132313	LF86	2131212123
LC37	2124423242	LD07	2124312124	LD77	2131134423	LE47	2123243424	LF17	2131211343	LF87	2123343223
LC38	2124331112	LD08	2124432342	LD78	2124243242	LE48	2124423444	LF18	2124223133	LF88	2123132442
LC39	2124234232	LD09	2131213213	LD79	2124212113	LE49	2124342432	LF19	2124213212	LF89	2123431222
LC40	2124424322	LD10	2124213113	LD80	2124342124	LE50	2124242134	LF20	2124432134	LF90	2124423132
LC41	2123321343	LD11	2124431134	LD81	2123131134	LE51	2131232242	LF21	2131213324	LF91	2123422344
LC42	2123311312	LD12	2124324433	LD82	2131121344	LE52	2123232133	LF22	2123342334	LF92	2131124424
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1994 GM Codes LA00-LZ99

Continued from page 92

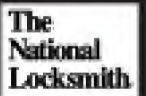
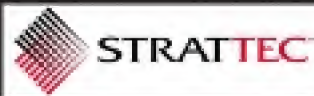
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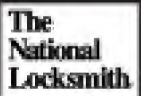
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1994 GM Codes

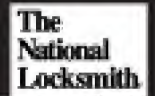
LA00-LZ99

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LJ60	2123313234	LK30	2131234213	LL00	2133132313	LL70	2131312443	LM40	2133221132	LN10	2132311232
LJ61	2124424244	LK31	2123133243	LL01	2132313232	LL71	2131322442	LM41	2133242442	LN11	2132313342
LJ62	2131232243	LK32	2131213343	LL02	2132134213	LL72	2131321342	LM42	2132324242	LN12	2132324424
LJ63	2123343222	LK33	2131232213	LL03	2131243344	LL73	2133234212	LM43	2132312324	LN13	2131322123
LJ64	2124232132	LK34	2124234243	LL04	2133242112	LL74	2131331244	LM44	2131242443	LN14	2133242433
LJ65	2131133442	LK35	2123433442	LL05	2131334223	LL75	2133132132	LM45	2132322432	LN15	2131313133
LJ66	2123312443	LK36	2123243312	LL06	2131242424	LL76	2131344234	LM46	2131321124	LN16	2133113233
LJ67	2131134324	LK37	2124423432	LL07	2133134243	LL77	2133212422	LM47	2133131134	LN17	2133124323
LJ68	2123424244	LK38	2124234322	LL08	2131324313	LL78	2133213323	LM48	2131321324	LN18	2131342313
LJ69	2124232313	LK39	2124423123	LL09	2132112134	LL79	2132134322	LM49	2133211213	LN19	2132242432
LJ70	2124221334	LK40	2124311322	LL10	2132342213	LL80	2133243113	LM50	2132211233	LN20	2131242322
LJ71	2124243134	LK41	2123432344	LL11	2132232132	LL81	2132422342	LM51	2131242232	LN21	2132313443
LJ72	2123423424	LK42	2131223443	LL12	2132123244	LL82	2132442344	LM52	2131234424	LN22	2133124313
LJ73	2123432442	LK43	2124212433	LL13	2133112324	LL83	2133234422	LM53	2132232433	LN23	2132442233
LJ74	2123233423	LK44	2124313444	LL14	2132243432	LL84	2133223344	LM54	2132242112	LN24	2131332124
LJ75	2124423234	LK45	2131234334	LL15	2133122124	LL85	2132443242	LM55	2132122312	LN25	2131243134
LJ76	2123131213	LK46	2124424333	LL16	2132232343	LL86	2133112334	LM56	2133224332	LN26	2132443424
LJ77	2123244234	LK47	2124342332	LL17	2133131122	LL87	2131332443	LM57	2132133113	LN27	2131311244
LJ78	2123313213	LK48	2124322434	LL18	2131332423	LL88	2132323242	LM58	2131344312	LN28	2132312422
LJ79	2123324233	LK49	2131212134	LL19	2133234242	LL89	2133213424	LM59	2132312323	LN29	2132432334
LJ80	2123342133	LK50	2131221213	LL20	2133212243	LL90	2132443234	LM60	2131332344	LN30	2132421232
LJ81	2124323122	LK51	2123232312	LL21	2132211344	LL91	2133211233	LM61	2132123132	LN31	2132423213
LJ82	2131122313	LK52	2124312334	LL22	2133132433	LL92	2132342123	LM62	2132434234	LN32	2131323424
LJ83	2123232442	LK53	2123311324	LL23	2132124433	LL93	2132133123	LM63	2131332242	LN33	2133224422
LJ84	2124321313	LK54	2123231123	LL24	2131324334	LL94	2131242342	LM64	2132311233	LN34	2133113243
LJ85	2124343123	LK55	2124213232	LL25	2131332422	LL95	2133124212	LM65	2133221323	LN35	2131342312
LJ86	2131233212	LK56	2124433444	LL26	2133212134	LL96	2132442443	LM66	2132342442	LN36	2133113443
LJ87	2123322444	LK57	2124431222	LL27	2131244334	LL97	2131334324	LM67	2133212423	LN37	2133123224
LJ88	2124342434	LK58	2124432343	LL28	2132324422	LL98	2133112442	LM68	2133232424	LN38	2132124234
LJ89	2124234312	LK59	2124231124	LL29	2132121322	LL99	2133231232	LM69	2132132213	LN39	2131322324
LJ90	2124224434	LK60	2124421344	LL30	2131242422	LM00	2132132422	LM70	2133132324	LN40	2132133212
LJ91	2131212333	LK61	2123132344	LL31	2132331343	LM01	2132324333	LM71	2132124334	LN41	2133122133
LJ92	2123432434	LK62	2123442443	LL32	2132312334	LM02	2132331342	LM72	2132431132	LN42	2131243113
LJ93	2123312323	LK63	2124432344	LL33	2132311342	LM03	2131344334	LM73	2133121232	LN43	2131342322
LJ94	2123423234	LK64	2124332434	LL34	2132424424	LM04	2131242313	LM74	2133223433	LN44	2132342333
LJ95	2124324243	LK65	2123244242	LL35	2132113444	LM05	2132311243	LM75	2132321344	LN45	2132332112
LJ96	2123342134	LK66	2124334313	LL36	2133131132	LM06	2131313343	LM76	2133242334	LN46	2132131323
LJ97	2123132444	LK67	2123443113	LL37	2131343122	LM07	2131243112	LM77	2131242343	LN47	2133134313
LJ98	2124423243	LK68	2123243122	LL38	2132113222	LM08	2132434243	LM78	2131242334	LN48	2132323244
LJ99	2124342133	LK69	2124313133	LL39	2132124243	LM09	2132121244	LM79	2133233224	LN49	2132312113



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LN50	2132443223	LP21	2133224212	LP92	2132442434	LR65	2132132112	LS34	2131332244	LT05	2132134313
LN51	2132112244	LP22	2133223113	LP93	2133213112	LR64	2132421343	LS35	2132134244	LT06	2132212333
LN52	2133112333	LP23	2132231232	LP94	2132133444	LR66	2132431134	LS36	2133123133	LT07	2132313233
LN53	2132324334	LP24	2132432113	LP95	2133224423	LR67	2132134323	LS37	2132321322	LT08	2132123122
LN54	2131343233	LP25	2132333313	LP96	2132434324	LR68	2131312334	LS38	2132342343	LT09	2132342243
LN55	2132123123	LP26	2133121312	LP97	2133234434	LR69	2132342443	LS39	2131321133	LT10	2131344232
LN56	2131311224	LP27	2131344233	LP98	2133133442	LR70	2131322134	LS40	2133131322	LT11	2131324324
LN57	2131243133	LP28	2132431122	LP99	2132334242	LR71	2132124344	LS41	2132442252	LT12	2132122432
LN58	2133112323	LP29	2133134244	LR00	2133231213	LR72	2132242333	LS42	2132422442	LT13	2132132244
LN59	2133124223	LP30	2132312423	LR01	2132432442	LR73	2133123444	LS43	2132123422	LT14	2132331324
LN60	2131334313	LP31	2132313112	LR02	2132132442	LR74	2132243234	LS44	2131321224	LT15	2132423312
LN61	2133224243	LP32	2132213344	LR03	2132124342	LR75	2133233244	LS45	2131234434	LT16	2131323312
LN62	2133123324	LP33	2131344322	LR04	2133232433	LR76	2131331344	LS46	2132124313	LT17	2133243344
LN63	2133221333	LP34	2132434233	LR05	2132123312	LR77	2133243424	LS47	2133244224	LT18	2131332344
LN64	2133243134	LP35	2132432243	LR06	2132311332	LR78	2131313424	LS48	2133234422	LT19	2133243342
LN65	2132443313	LP36	2132433124	LR07	2131313234	LR79	2131322334	LS49	2133232123	LT20	2131343434
LN66	2132231342	LP37	2131324234	LR08	2132433243	LR80	2131332313	LS50	2132231344	LT21	2132234242
LN67	2132342242	LP38	2132133423	LR09	2132332123	LR81	2132213444	LS51	2132323442	LT22	2131323132
LN68	2132443113	LP39	2132244313	LR10	2132132432	LR82	2132123113	LS52	2132212433	LT23	2132334323
LN69	2131322113	LP40	2132243324	LR11	2132121313	LR83	2131312133	LS53	2133113242	LT24	2132313234
LN70	2133243423	LP41	2132313423	LR12	2131342124	LR84	2132323213	LS54	2131342332	LT25	2132342434
LN71	2132233424	LP42	2132423133	LR13	2132334312	LR85	2132234424	LS55	2132243233	LT26	2133231123
LN72	2133123324	LP43	2132443442	LR14	2131323113	LR86	2131332123	LS56	2132424422	LT27	2133121324
LN73	2132313224	LP44	2132242343	LR15	2133133422	LR87	2132344223	LS57	2132113122	LT28	2131234422
LN74	2133242343	LP45	2132424334	LR16	2133231342	LR88	2133213422	LS58	2132134424	LT29	2133232342
LN75	2132124333	LP46	2133122423	LR17	2132312234	LR89	2133242122	LS59	2133211232	LT30	2132432244
LN76	2132334222	LP47	2131343132	LR18	2131321134	LR90	2131243233	LS60	2132321132	LT31	2131244312
LN77	2132323132	LP48	2133112322	LR19	2132213134	LR91	2132434424	LS61	2131243442	LT32	2132122442
LN78	2132331212	LP49	2132231334	LR20	2132213113	LR92	2133134222	LS62	2131334344	LT33	2132243222
LN79	2132331313	LP50	2133231242	LR21	2132312433	LR93	2131322423	LS63	2132113313	LT34	2133243222
LN80	2131344313	LP51	2131343244	LR22	2131344324	LR94	2131243234	LS64	2131311323	LT35	2132432123
LN81	2132323444	LP52	2131313123	LR23	2132324324	LR95	2133224233	LS65	2133113223	LT36	2133223434
LN82	2132121123	LP53	2132212132	LR24	2131312442	LR96	2132423132	LS66	2132112432	LT37	2131242112
LN83	2132421324	LP54	2133242233	LR25	2131342112	LR97	2132424232	LS67	2132422433	LT38	2132123313
LN84	2133122343	LP55	2133123312	LR26	2133113344	LR98	2132334212	LS68	2132213133	LT39	2133211333
LN85	2131324434	LP56	2133223212	LR27	2131244222	LR99	2132323433	LS69	2132433422	LT40	2132112242
LN86	2132113132	LP57	2132121132	LR28	2132424433	LR00	2132323423	LS70	2132431133	LT41	2133233113
LN87	2133131343	LP58	2133134422	LR29	2132234322	LS00	2131312422	LS71	2133242344	LT42	2133132213
LN88	2132442312	LP59	2132121242	LR30	2132442422	LS01	2132421313	LS72	2133212432	LT43	2133212443
LN89	2132342332	LP60	2132443124	LR31	2133122443	LS02	2131332442	LS73	2132321244	LT44	2132123432
LN90	2131343224	LP61	2132342324	LR32	2133113212	LS03	2133242132	LS74	2132313324	LT45	2133234233
LN91	2133122424	LP62	2131321334	LR33	2132313134	LS04	2132244334	LS75	2132432342	LT46	2131322132
LN92	2132344223	LP63	2132433432	LR34	2132234432	LS05	2131342424	LS76	2132131123	LT47	2132233243
LN93	2131321213	LP64	2132332244	LR35	2132422432	LS06	2132112332	LS77	2132112424	LT48	2132242342
LN94	2133132432	LP65	2132232443	LR36	2133212124	LS07	2132321222	LS78	2132443232	LT49	2132442133
LN95	2132423442	LP66	2132243232	LR37	2132242334	LS08	2132423112	LS79	2132443423	LT50	2132123342
LN96	2132121343	LP67	2132321233	LR38	2133131233	LS09	2132321312	LS80	2132332133	LT51	2133234424
LN97	2133213213	LP68	2132421134	LR39	2131334233	LS10	2133242133	LS81	2131334422	LT52	2133223432
LN98	2131331213	LP69	2132134233	LR40	2132131312	LS11	2133211242	LS82	2132234324	LT53	2133131232
LN99	2133132133	LP70	2132244232	LR41	2132133213	LS12	2131342243	LS83	2132424434	LT54	2133113124
LP00	2132213124	LP71	2132134234	LR42	2133234423	LS13	2132334244	LS84	2132423444	LT55	2132421344
LP01	2132343312	LP72	2133123432	LR43	2131332343	LS14	2132434323	LS85	2133212244	LT56	2133131244
LP02	2132211332	LP73	2133113132	LR44	2131342212	LS15	2133121313	LS86	2131242243	LT57	2131342342
LP03	2132133424	LP74	2132334233	LR45	2133211343	LS16	2133124322	LS87	2131242242	LT58	2131342334
LP04	2133131312	LP75	2132113212	LR46	2131331324	LS17	2131343424	LS88	2132122313	LT59	2131313233
LP05	2133123122	LP76	2132331223	LR47	2133212323	LS18	2132312242	LS89	2132212332	LT60	2131242434
LP06	2132231332	LP77	2131331233	LR48	2132312123	LS19	2133242423	LS90	2131243242	LT61	2131322342
LP07	2132121334	LP78	2131331133	LR49	2133234322	LS20	2132324232	LS91	2131342133	LT62	2132232112
LP08	2132124233	LP79	2131322344	LR50	2133212324	LS21	2131312132	LS92	2133113434	LT63	2132313132
LP09	2132343222	LP80	2132131242	LR51	2133132443	LS22	2132131134	LS93	2132342423	LT64	2131321322
LP10	2132423234	LP81	2132242312	LR52	2132343124	LS23	2133242333	LS94	2132311244	LT65	2132231243
LP11	2133124434	LP82	2133212322	LR53	2132234243	LS24	2131311242	LS95	2131332112	LT66	2133224324
LP12	2131322443	LP83	2132342334	LR54	2131234432	LS25	2132124323	LS96	2133213234	LT67	2131313313
LP13	2132121133	LP84	2131324233	LR55	2132344224	LS26	2132131133	LS97	2133242422	LT68	2131322124
LP14	2131324213	LP85	2132442334	LR56	2133232124	LS27	2131323444	LS98	2132232432	LT69	2132423342
LP15	2131343113	LP86	2133121123	LR57	2131323122	LS28	2132123324	LS99	2131312322	LT70	2133232442
LP16	2133133122	LP87	2133134223	LR58	2133223442	LS29	2132132113	LT00	2132431332	LT71	2132113124
LP17	2133121134	LP88	2132443123	LR59	2132424213	LS30	2133213122	LT01	2131342122	LT72	2132134423
LP18	2131244212	LP89	2132343424	LR60	2132113433	LS31	2132442313	LT02	2131324432	LT73	2132432132
LP19	2132331233	LP90	2132243242	LR61	2132322313	LS32	2132313113	LT03	2132113424	LT74	2133112234
LP20	2132423122	LP91	2132431223	LR62	2133133124	LS33	2131331313	LT04	2132423123	LT75	2133224234



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LT76	2133134224	LU47	2133231122	LV18	2132213132	LV89	2132331133	LW60	2132431323	LX31	2132323122
LT77	2132231324	LU48	2133233112	LV19	2132423344	LV90	2131334212	LW61	2132433444	LX32	2131243223
LT78	2133123113	LU49	2131312213	LV20	2133131323	LV91	2133112132	LW62	2132342212	LX33	2132113442
LT79	2132343233	LU50	2132431324	LV21	2132422344	LV92	2133133244	LW63	2133233124	LX34	2132122443
LT80	2133132312	LU51	2132134342	LV22	2132243313	LV93	2133133242	LW64	2133221232	LX35	2131242233
LT81	2132322343	LU52	2131334222	LV23	2131332434	LV94	2133132423	LW65	2132432312	LX36	2133224433
LT82	2131311324	LU53	2132312213	LV24	2133231223	LV95	2133221324	LW66	2133124312	LX37	2132124424
LT83	2132213423	LU54	2133231343	LV25	2131331134	LV96	2133232134	LW67	2132332444	LX38	2133134212
LT84	2133123434	LU55	2132121312	LV26	2132243423	LV97	2132132343	LW68	2132313343	LX39	2133213222
LT85	2131312243	LU56	2133243112	LV27	2133121133	LV98	2131331312	LW69	2131324243	LX40	2132332132
LT86	2131313344	LU57	2133124224	LV28	2132131343	LV99	2133232313	LW70	2133234244	LX41	2132124232
LT87	2133132122	LU58	2132342424	LV29	2131343442	LW00	2132433134	LW71	2131331343	LX42	2132133442
LT88	2131313434	LU59	2132133434	LV30	2132212443	LW01	2132334423	LW72	2132131224	LX43	2132313432
LT89	2131343242	LU60	2131243132	LV31	2133113213	LW02	2133123433	LW73	2132313223	LX44	2132334243
LT90	2132233122	LU61	2133224232	LV32	2132431233	LW03	2132321323	LW74	2132421123	LX45	2132331132
LT91	2132423212	LU62	2132431242	LV33	2133121344	LW04	2132311224	LW75	2131342134	LX46	2132243442
LT92	2131321332	LU63	2132342323	LV34	2133244213	LW05	2132322443	LW76	2131311333	LX47	2132342342
LT93	2131242132	LU64	2132133112	LV35	2132213234	LW06	2132122433	LW77	2132112334	LX48	2132424343
LT94	2133131123	LU65	2132213434	LV36	2132332433	LW07	2132344342	LW78	2131243243	LX49	2133243232
LT95	2132342432	LU66	2131313222	LV37	2131324424	LW08	2132242433	LW79	2133213243	LX50	2132313344
LT96	2132132424	LU67	2133132424	LV38	2133123134	LW09	2132321333	LW80	2132212432	LX51	2133113234
LT97	2133211244	LU68	2132113322	LV39	2133231323	LW10	2133121244	LW81	2131342132	LX52	2132442212
LT98	2133211312	LU69	2132424432	LV40	2132123133	LW11	2131313124	LW82	2132443324	LX53	2133122134
LT99	2133132313	LU70	2132213242	LV41	2131324344	LW12	2132343224	LW83	2133134322	LX54	2132322312
LU00	2133234213	LU71	2132434244	LV42	2132134312	LW13	2133112123	LW84	2131332213	LX55	2131324323
LU01	2132344212	LU72	2133121343	LV43	2133122324	LW14	2132234232	LW85	2132342344	LX56	2132124322
LU02	2133122444	LU73	2132431313	LV44	2132343132	LW15	2131313212	LW86	2132132243	LX57	2131312332
LU03	2131312123	LU74	2131321132	LV45	2132213323	LW16	2133134342	LW87	2132321133	LX58	2132442324
LU04	2132443112	LU75	2133231132	LV46	2132212133	LW17	2133242323	LW88	2133113313	LX59	2133232242
LU05	2132443233	LU76	2133223124	LV47	2132243122	LW18	2132112442	LW89	2132313242	LX60	2132121124
LU06	2132231322	LU77	2132344322	LV48	2133234234	LW19	2133223423	LW90	2133242332	LX61	2131313423
LU07	2133124344	LU78	2132122444	LV49	2132212312	LW20	2132321123	LW91	2133213232	LX62	2131312324
LU08	2132331244	LU79	2132124344	LV50	2133211313	LW21	2131311332	LW92	2132323113	LX63	2131313432
LU09	2132331213	LU80	2131242213	LV51	2131321333	LW22	2132124434	LW93	2131343342	LX64	2131322432
LU10	2132431343	LU81	2132134242	LV52	2131331322	LW23	2132421132	LW94	2131334342	LX65	2132323212
LU11	2133133444	LU82	2132423424	LV53	2132422334	LW24	2132243123	LW95	2132343133	LX66	2133124424
LU12	2131313232	LU83	2132332344	LV54	2133123132	LW25	2131243342	LW96	2131321344	LX67	2133134344
LU13	2132442332	LU84	2133112242	LV55	2132313322	LW26	2132323432	LW97	2131331132	LX68	2133243313
LU14	2132323443	LU85	2132122342	LV56	2132313222	LW27	2132334322	LW98	2132113312	LX69	2133232344
LU15	2131322444	LU86	2133131344	LV57	2131344342	LW28	2132234233	LW99	2131324312	LX70	2133242322
LU16	2132432443	LU87	2133113323	LV58	2132132123	LW29	2132131223	LX00	2132213233	LX71	2131331232
LU17	2133243233	LU88	2132434232	LV59	2131324242	LW30	2132132423	LX01	2132423433	LX72	2132434322
LU18	2133243122	LU89	2132443224	LV60	2133234312	LW31	2132311312	LX02	2132442334	LX73	2132212334
LU19	2132113223	LU90	2133131243	LV61	2132112324	LW32	2132332134	LX03	2133221233	LX74	2132121344
LU20	2132131332	LU91	2132322132	LV62	2132243124	LW33	2132324312	LX04	2132242133	LX75	2133231233
LU21	2131244224	LU92	2132323243	LV63	2131312432	LW34	2131244442	LX05	2133221322	LX76	2133223122
LU22	2132423113	LU93	2132112444	LV64	2132421133	LW35	2132334424	LX06	2132213442	LX77	2133112244
LU23	2132343232	LU94	2131344242	LV65	2131342433	LW36	2131343232	LX07	2131331122	LX78	2132311324
LU24	2131313224	LU95	2133213223	LV66	2132331243	LW37	2132321324	LX08	2132442124	LX79	2132343313
LU25	2132211342	LU96	2132312312	LV67	2132232444	LW38	2132434213	LX09	2132332424	LX80	2133213433
LU26	2132134232	LU97	2132232133	LV68	2132434312	LW39	2132332343	LX10	2132211333	LX81	2131313322
LU27	2133244222	LU98	2133231313	LV69	2133233442	LW40	2131313312	LX11	2133212234	LX82	2133112422
LU28	2133221123	LU99	2132322133	LV70	2132211334	LW41	2132443342	LX12	2132124422	LX83	2133244212
LU29	2132332443	LV00	2132113134	LV71	2132342422	LW42	2132213213	LX13	2131342234	LX84	2131332243
LU30	2132313124	LV01	2132131334	LV72	2132324434	LW43	2132322344	LX14	2132343422	LX85	2132243113
LU31	2133223213	LV02	2132431322	LV73	2131243313	LW44	2133224324	LX15	2132323133	LX86	2133232432
LU32	2133131212	LV03	2132421332	LV74	2133223244	LW45	2132432343	LX16	2132313422	LX87	2133224432
LU33	2132213244	LV04	2131242433	LV75	2132234422	LW46	2132344213	LX17	2132133244	LX88	2132124324
LU34	2132311344	LV05	2133134323	LV76	2132213212	LW47	2132332243	LX18	2133242434	LX89	2133242342
LU35	2132234344	LV06	2132334224	LV77	2132133422	LW48	2132213324	LX19	2133132444	LX90	2133233424
LU36	2132321134	LV07	2132431244	LV78	2132433424	LW49	2132431213	LX20	2133242443	LX91	2131244342
LU37	2132431312	LV08	2131313243	LV79	2133242242	LW50	2131324232	LX21	2132331224	LX92	2133223342
LU38	2132343242	LV09	2133212433	LV80	2132133432	LW51	2131243122	LX22	2132123423	LX93	2132124212
LU39	2132442343	LV10	2132121332	LV81	2132112333	LW52	2131242324	LX23	2133232213	LX94	2133124243
LU40	2132321213	LV11	2132343234	LV82	2132431123	LW53	2132342234	LX24	2132113234	LX95	2132211324
LU41	2133231243	LV12	2133221242	LV83	2133113442	LW54	2132242443	LX25	2133112432	LX96	2132112323
LU42	2133123244	LV13	2132323123	LV84	2131331242	LW55	2133123212	LX26	2132234334	LX97	2132242442
LU43	2132342132	LV14	2132324233	LV85	2132343442	LW56	2132113432	LX27	2132421334	LX98	2133231224
LU44	2133223242	LV15	2131342344	LV86	2131244242	LW57	2132421124	LX28	2132434422	LX99	2131323313
LU45	2131331243	LV16	2131343222	LV87	2132442113	LW58	2132424313	LX29	2133134234	LY00	2132343423
LU46	2131243434	LV17	2132432324	LV88	2132133122	LW59	2132112132	LX30	2133112243	LY01	2132131232

1994 GM Codes LA00-LZ99

Continued from page 98

LY02	2133231324	LY35	2131323422	LY68	2132131222	LZ01	2133232243	LZ34	2132421242	LZ67	2132113434
LY03	2133221343	LY36	2132322444	LY69	2132113443	LZ02	2131343223	LZ35	2133213313	LZ68	2132234434
LY04	2133123443	LY37	2131244313	LY70	2132432124	LZ03	2132431344	LZ36	2131342232	LZ69	2132123234
LY05	2132342322	LY38	2131243124	LY71	2132442424	LZ04	2133243124	LZ37	2131344222	LZ70	2132244213
LY06	2133131124	LY39	2132313323	LY72	2133223324	LZ05	2132343123	LZ38	2131334424	LZ71	2133113322
LY07	2131334432	LY40	2132324234	LY73	2132233242	LZ06	2132344242	LZ39	2133231212	LZ72	2131323443
LY08	2131343112	LY41	2133233444	LY74	2131243424	LZ07	2132131233	LZ40	2132344323	LZ73	2133112423
LY09	2133124422	LY42	2133134423	LY75	2131342235	LZ08	2133213343	LZ41	2131331342	LZ74	2132231212
LY10	2132313212	LY43	2132421322	LY76	2132344222	LZ09	2132242434	LZ42	2132322442	LZ75	2133242313
LY11	2133113422	LY44	2131321313	LY77	2131323212	LZ10	2133131242	LZ43	2132213433	LZ76	2132322433
LY12	2131312433	LY45	2132424234	LY78	2132131313	LZ11	2132112433	LZ44	2132423422	LZ77	2133213123
LY13	2131312313	LY46	2132431124	LY79	2133242123	LZ12	2133223132	LZ45	2131312423	LZ78	2132442242
LY14	2133132342	LY47	2132233132	LY80	2131244324	LZ13	2131242132	LZ46	2133213442	LZ79	2132112124
LY15	2132433244	LY48	2132243243	LY81	2131243422	LZ14	2132233423	LZ47	2132343223	LZ80	2131342443
LY16	2132313244	LY49	2133232443	LY82	2132342122	LZ15	2132131243	LZ48	2132311334	LZ81	2132122113
LY17	2133122312	LY50	2132431222	LY83	2131322433	LZ16	2133213423	LZ49	2132432424	LZ82	2132113243
LY18	2132343432	LY51	2133232422	LY84	2132312132	LZ17	2133213312	LZ50	2131324244	LZ83	2133212334
LY19	2133231312	LY52	2132313433	LY85	2133243243	LZ18	2132134422	LZ51	2132424333	LZ84	2133223444
LY20	2132213343	LY53	2132123124	LY86	2132124312	LZ19	2133123423	LZ52	2132132313	LZ85	2131324423
LY21	2133213113	LY54	2132331323	LY87	2132213443	LZ20	2132421244	LZ53	2132244242	LZ86	2133124423
LY22	2131312323	LY55	2132233112	LY88	2133232312	LZ21	2133213124	LZ54	2133243434	LZ87	2132233134
LY23	2131343324	LY56	2132323424	LY89	2133213324	LZ22	2131321232	LZ55	2133133212	LZ88	2133132434
LY24	2131322343	LY57	2132132334	LY90	2131313213	LZ23	2131242332	LZ56	2132424243	LZ89	2132423443
LY25	2132332423	LY58	2132213432	LY91	2133112332	LZ24	2133121243	LZ57	2133234344	LZ90	2132122434
LY26	2133224434	LY59	2132324432	LY92	2132124242	LZ25	2131322312	LZ58	2132324343	LZ91	2132343134
LY27	2132123443	LY60	2131342333	LY93	2133243324	LZ26	2133121942	LZ59	2133123442	LZ92	2131242234
LY28	2133122123	LY61	2133113224	LY94	2132113224	LZ27	2132234313	LZ60	2132313424	LZ93	2132344324
LY29	2131321244	LY62	2133243312	LY95	2132443133	LZ28	2133212213	LZ61	2132243132	LZ94	2132124343
LY30	2133123424	LY63	2132244243	LY96	2132432112	LZ29	2132134432	LZ62	2133131342	LZ95	2132331344
LY31	2132213123	LY64	2132133234	LY97	2132332442	LZ30	2132243344	LZ63	2131242124	LZ96	2132424423
LY32	2132131244	LY65	2131331212	LY98	2132112443	LZ31	2131324422	LZ64	2132434212	LZ97	2132234323
LY33	2132324213	LY66	2133121124	LY99	2132422134	LZ32	2132343434	LZ65	2131311243	LZ98	2132213112
LY34	2132343113	LY67	2133123344	LZ00	2131331323	LZ33	2132213312	LZ66	2133213224	LZ99	2132234342



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VIEWPOINT

Continued from page 8

other. To help protect and make our local industry better and stronger.

To try and teach all of this and more to so many locksmiths causes a great deal of friction and stress among everyone concerned. The people who were put in power were put there by majority, therefore they must represent the majority. Trust them!

I'm neither a journalist nor a politician, but I do respect the Democratic way, and I will continue to do what my conscience and the majority of my fellow locksmiths require of me, in an effort to unify this industry. It's nothing personal.... it's my job.

Arthur M. Shoob, Jr. CML
Art's Safe & Lock Inc.
Hollywood, Florida



LIGHTER SIDE

Continued from page 62

Uncle Harry's elbow wavered.
Reverend Carmichael's words froze.

All eyes opened and turned to little Greg, standing with his nose barely peeking over the edge of the table.

"Wh-what was that?" asked Uncle Harry, scowling down.

"May I say grace, this year?" asked Greg.

A low murmur swept around the table.

"Out of the mouths of babes," beamed Reverend Carmichael, clasping his hands together and looking skyward in an attitude of prayer. "Of course you may, my boy. Of course you may. Come here to me." Reverend Carmichael lifted little Greg high in his arms, so all could see and hear him. "Now, let's all bow while this young man says grace for us."

Uncle Harry arched his scraggly eyebrows in silent disapproval and resumed his carving stance while all bowed their heads once more.

There was a moment of silence.

No one moved.

The silence deepened.

"Go ahead, my boy," urged Reverend Carmichael in a whisper. "Say grace for us. Speak up, now, where everyone can hear you."

Greg took a deep breath, squared

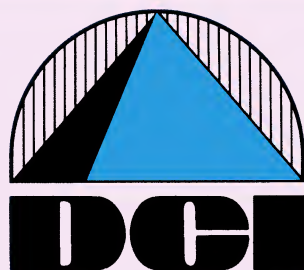
his shoulders, and with a snaggletoothed grin, said in a loud voice, "Grace!"

There was an instant of stunned silence. Then Uncle Harry roared with laughter. Inadvertently, he doubled over, lunging into the turkey. It scooted off the platter, across the table between the sweet potatoes and the ambrosia, right into the arms of Cousin Fred. Fred fumbled. In a scramble to catch the bird, someone yanked a corner of the table cloth, overturning Aunt Janie's Broccoli-Cheese Surprise onto the floor and scattering Cousin Bertha's Prize-winning Pepper Cornpones across the room. Brother Eddie managed to catch Flora Bell's Triple-lettuce Salad, but Hazel's Banana Brandy Trifle got away.

When the turmoil had finally ceased, a quick look around the room told Aunt Mary that tradition, along with everything else in the room, had been demolished. The only salvageable foods appeared to be the lettuce salad, a plateful of home-grown tomatoes, and the turkey.

Never one to let unforeseen

Continued on next page



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LIGHTER SIDE

Continued from previous page

circumstances spoil her day, Aunt Mary calmly shooed everyone out into the back yard to set up tables there. In no time, there appeared baskets of sliced bread along with various sandwich "fixings" and the turkey, appropriately sliced.

After Don had completed his business and was climbing into his service van, he heard someone timidly suggest a blessing on the meal. Uncle Harry, who hardly ever said anything, responded in a loud voice, "Good bread, good meat; Good God, let's eat!"

Even Reverend Carmichael laughed heartily.

I am told the Bruckner family still gathers each year for Thanksgiving, although not always at Aunt Mary's house, and the women still bring their own special culinary delights, and there is still a huge stuffed turkey (although the old enameled roaster has been replaced by a throw-away aluminum foil pan) but there have been other changes.

Now a basket of sandwich bread

and a large jar of store-bought mayonnaise always mysteriously appears on the table, prompting one of the old-timers to jovially recant the year of the turkey sandwiches – the year traditions fell, from "grace."



BAKED OR FRIED?

Continued from page 81

The repair of the door is easy. Take it to a welding shop and have the former guard key hole welded shut by using a 1" plug, 1" deep. After cleaning and repainting the door, it now looks like a one key door. Take the safe deposit lock apart and clean and lubricate. Make sure the renter key works smoothly when retracting the bolt, and re-assemble the door, and BRINKS handle. While you are at it, cut a few more keys for the owner so this will not happen again.

Again, there is more to opening safes, ordering fish, and life than just "Baked or Fried". Look at the menu and decide what it is you and the customer want. Open and Prosper!!!!



SEROOGY SPEAKS

Continued from page 82

plan will not bring these people to the locksmith's door. Therefore, don't chase them.

Instead of consuming our time worrying about the unchangeable and unattainable few, let's focus on the much larger untapped potential – those people who are willing to spend money having it done right the first time.

In conclusion we must remember that manufacturers don't exist because of us, we exist because of them. Let's use their products as well as we can for our own profit and benefit. Let's take advantage of their seminars and training sessions. Use them!

And, regarding the Do-It-Yourselfers, let's not focus on a small group of people that won't spend money having it done right. Instead, let's improve our technical abilities, learn to market ourselves correctly, demonstrate ourselves as professionals, and intelligently take advantage of every opportunity we do have.



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SHOP TALK

Helpful questions and answers

Shop Talk answers readers questions on any locksmith related topic. Only letters judged to be of general interest will be published. We regret that we cannot answer individual letters. Because of the volume of mail, only those questions answered in the magazine will receive answers. Send your questions to Shop Talk, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

Q: Where can I locate the locks for an Atrium French style door? It has what looks to be a large interchangeable core cylinder. The key turns okay in both directions but the lock doesn't open. What's wrong and how do I fix it. Ted Wilsfire, North Carolina

A: Jim Maloney of Shoreline Locksmiths in Mystic, CT helped me answer this one, Ted. According to Jim, the lock you are dealing with employs a profile cylinder, typically seen in Europe. A cam or lug that turns when the key or thumbturn is turned and pulls back on the bolt/latch retracting lever.

Unfortunately, in many cases the retracting lever becomes bent, disabling the lock. The only fix is to replace. Jim states that the cylinders used to be available from Ideal, but have since been discontinued. Therefore, he recommends that you contact Atrium in Dallas, TX at 214-634-9663. Atrium representatives will try and steer you to the closest

distributor or will supply you with the locks themselves.

To remove the lock it is first necessary to open the door. Having done quite a few of these doors, Jim recommends removing the door from inside the house by pulling the hinge pins and pulling the door out of the opening. Loosen the cylinder retaining screw found on the lock face, and remove the cylinder. Then remove the lock and replace. Good luck and Thanks Jim.

Q: What is the best method for replacing the ignition cylinder on a 1988 Mercedes 300TE using the four-track key? The customer's current key won't turn the ignition cylinder so I can remove it easily. The replacement



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ignition has a spring steel retainer on the side of it much like a Volkswagen ignition. Can I drill the side of the lock housing and depress the retainer for ignition removal? Jeff Daniels, Louisiana.

A: I contacted The National Locksmith automotive tech writer, Michael Hyde. Jeff. No, unfortunately, there are no sure fire, single answer methods for an easy removal. This lock is designed with two retainers. One resembles the Volkswagen ignition spring retainer you mentioned, and the other is a pair of keyed locking lugs that are part of the housing.

To remove the lock, the key must be turned and a probe inserted into both a top and bottom release access hole found on the face of the lock to depress the retainer and lugs. Even with a working ignition this is difficult. So, having a bad lock it will be tougher, and in either case requires that the ignition be turned. In any case, try one of these methods.

Before doing anything, try and diagnose the problem. Check for a worn key and/or lock tumblers. One

common problem is having the hardened facecap break loose and separate itself from the plug. In this case the facecap will be loose or spin freely.

If you suspect a worn key (not a common occurrence), cut a new key by code.

If you suspect worn lock tumblers you have a couple of avenues. First try cutting a new key by code. After inserting the key all the way into the lock attach a small Vice-Grip pliers to the blade with the pliers hanging straight down. Apply light turning pressure to the bow while gently tapping and rapping the key and pliers. This is done in an attempt to vibrate the tumblers to the shearline. Remember, this must be performed very gently so as not to break the key.

If that doesn't work try cutting a new key by code leaving the first three or four cuts (from bow) an increment or two shallower than the original key. Place the key in the lock and either try to impression the first four tumblers or jiggling the key while applying light turning pressure.

If the facecap is loose or spinning, the lock will need to be manipulated in order to turn the lock. Again, no force should be involved, this is a manipulation technique. Cut a new key with a cutback shoulder. This will allow the key to move deeper into the lock. After inserting the key, gently rock it up and down and move it in and out of the lock to manipulate the tumblers to the shearline.

After turning the lock, insert your probe and remove the lock.



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TEST DRIVE



Taking Industry Products for a Spin Around the Block

ASP's Lexus locks

PRODUCT: Lexus locks and Service Kit from Auto Security Products. Ignition C30-181 at \$99.50, trunk B30-181 at \$148.25, door D30-181 at \$197.50, D30-182 at \$154.25 and D30-183 at \$89.95. Pinning kit A30-110 for Toyota/Lexus/Mazda at \$61.50. Available through ASP distributors, prices may vary. (See photograph 1.)

PRODUCT DESCRIPTION: With more vehicles turning to high security locking systems it is necessary for the locksmith to find affordable and available service components. Auto Security Products provides locks, lock components and service kits for most standard and high security key system for foreign and some domestic vehicles.

It should be noted that all locks and components sold by ASP are produced by the Original Equipment Manufacturer (OEM). This is a plus in that the locksmith is replacing the locks with exact replacement parts. It should also be noted that the following dealer prices are from the Mitchell Collision Estimate Guide.

The C30-181 ignition fits the 1990 to 1993 Lexus LS400. Suggested dealer price is \$218.87 with a 1 hour, six minute installation time.

The B30-181 trunk lock fits the 1990 to 1993 LS400. Suggested dealer price is \$210.37 with a 30 minute install time.

The D30-181 (passenger) and D30-182 (driver) door locks fit the 1990 to 1993 LS400. Suggested dealer price on both locks is \$210.37 with an install time at 1 hour. Because ASP and dealer pricing on these two items may be close, ASP considers these two locks to be convenience items and recommends checking dealer pricing and availability before purchasing.

The D30-183 (passenger) door lock fits the 1992 to 1994 ES300. Suggested dealer price is \$219.15 with a 1 hour, 6 minute install time.

The A30-110 Service Kit provides all the tumblers and springs needed for Toyota split wafer systems, Lexus high security locks, and the Mazda Millennium lock. This is not a dealer item.

FRIENDLINESS: Because these locks are manufactured by the OEM the quality and ease of service are predetermined by the lock system and design. With ASP supplying these locks, however, the locksmith is afforded lower costs and easier accessibility. The service kit is simply laid out and allows the locksmith the ability to key up new locks to fit the original keys, a service the dealer cannot provide.



1. Lexus locks by ASP.

FEATURES: The Lexus locks provided by ASP come assembled. Door and trunk locks include their designated electrical switch. With the service kit, these locks can be easily rekeyed to fit the customer's original lock. Despite the high security key-

way, disassembly of these locks is identical to standard Toyota ignition, door and trunk locks with the exception of the added switches.

COMMENTS AND SUGGESTIONS: Thus far, it has been very hard for the automotive locksmith to procure high security auto locks and components. ASP has obviously made big inroads in this market and has been able to supply us with both locks and service kits. The application guide by ASP is also very thorough and is an excellent reference tool for any locksmith who does auto work.

If there are any suggestions for ASP, it's to keep expanding. These locks are hard and expensive to come by.

CONCLUSION: The availability and affordability of the Lexus lock components (as well as many other auto lock parts) by ASP allow the locksmith to be competitive in a dealer oriented market. For any locksmith doing auto work (especially high security), ASP catalogs and guides, and parts, are a necessity.

DESCRIPTION:

Lexus replacement locks by ASP

COMMENTS:

Opens new markets currently held by the auto dealer.

TEST DRIVE RESULTS:

For locksmiths focusing on auto work, ASP offers a new alternative for lower cost and readily available Lexus locks and service kits.